STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 5854

Investigation into the)
Restructuring of the Electric)
Utility Industry in Vermont)

Order entered: 12/31/96

THE POWER TO CHOOSE:
A PLAN TO PROVIDE CUSTOMER CHOICE OF ELECTRICITY SUPPLIERS

REPORT AND ORDER

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I. INTRODUCTION

At the end of the Twentieth Century, global competition in goods and services, in ideas, and in information management, all apply persistent pressure for change on both public and private systems: standing still is not an option. In government, as in business, education, and science, pursuit of better ways of doing things must be relentless.

The franchise system of regulated electric utilities, created to maximize the benefits of electricity to America's families and businesses, has served the nation well. Across the nation, electricity is available at lower rates and at levels of reliability that are unsurpassed anywhere else in the world.

The franchise system has also served Vermont well. Without significant reserves of fossil fuels or other conventional energy resources, Vermonters have nevertheless developed a reliable, diverse electric system serving all corners of our rural state, at average rates that are well below both the Northeast and New England regional averages. Over the past ten years, electric rates in Vermont have declined, in real terms, by 11 percent. Sensible rate design and energy efficiency programs have cost-effectively lowered our state's total electric bill by hundreds of millions of dollars. Although the environmental impacts of electric generation are often very large, the Vermont electric system's environmental "footprint" is smaller than that of most other states. Since 1980, while our economy has grown 59 percent in real terms, we have met 100 percent of our electric load growth through the development of in-state, small-scale renewable resources and cost-effective energy efficiency investments. The Vermont legislature, our regulatory traditions, our utilities, and many business and civic leaders all deserve to share the credit for these achievements.

It is not enough, however, to rest upon these accomplishments. In a global economy, in the information age, the pursuit of excellence must be never-ending. Even though Vermont's electric system is not "broken," it must be improved. Moreover, steps must be taken now to deal with a number of emerging challenges:

- Most importantly, Vermont utilities now face a period of substantially increasing power costs while the other states in our region are expecting declining electricity prices. A substantial share of Vermont's portfolio of generation facilities consists of firm, long-term purchased power contracts. Unless they are restructured, these obligations will prevent Vermonters from taking advantage of lower prices set in a vibrant, open market, and thereby making Vermont's businesses less competitive and increasing households' total energy bills. Meanwhile, our neighbors in the region and competitors elsewhere are also pursuing reforms to drive their electricity costs down.

- Investment in energy efficiency is declining. Demand-side management programs have traditionally been provided by franchised utilities; but, amid the uncertainty of industry reform, investment in cost-effective savings is

declining. In Vermont, these investments declined by twenty percent between 1994 and 1995. Moveover, potential innovations in energy service industries are suppressed by the lack of customer choice among electricity providers. Restructuring will not eliminate the need for energy efficiency, but it requires creation of new ways to deliver these benefits.

- Likewise, investment in renewable energy technologies is falling off. Over the past 15 years, Vermont has met all of its growth in electric demand through the addition of renewable energy facilities. But in recent years, new investment has declined precipitously, to the detriment of the system's long-term price-stability, reliability, and the environment.

- Existing and new environmental challenges, from mercury and harmful small particulates to global warming, will have to be addressed. The tremendous pressures to reduce costs have improved the economic efficiency of utilities, but they also threaten to increase our reliance on lower-cost, environmentally damaging energy resources. Restructuring offers a unique opportunity to address these problems responsibly and coherently, at the state, regional, and national levels.

- Support for low-income households has also been declining. Between 1994 and 1996, federal funds for the Low-Income Home Energy Assistance Program (LIHEAP) were cut by 45 percent. The potential savings in costs that competition offers will help offset the cut-backs in assistance to needy families, but will likely not be sufficient. With customer choice comes the need and the opportunity to implement new mechanisms to help our most vulnerable citizens.

- Currently, it is only the state's large commercial and industrial customers who enjoy significant flexibility in electric services and rates, albeit only from their local franchise utility. Special contracts for interruptible and other services provide them with flexibility and lower prices and offer benefits for the system as a whole; but such alternative arrangements are not now available to our smaller commercial and residential customers.

- Today's electric utilities now confront significant financial risks and limited access to capital, while the uncertainty surrounding restructuring greatly increases the risks of new investment. This in turn threatens the overall reliability of the system, and calls for the swift but careful resolution of the many issues facing the industry.

- Lastly, the market for electricity in which Vermont operates is regional in nature and has been managed for a quarter of a century as a single pool. As other New England states also move to direct retail access, it appears that new regional structures and institutions must be designed to give Vermont customers an equal opportunity to participate in these new markets. This requires reform within Vermont as well as continuing participation in regional restructuring activities.

In addition to these challenges, rapidly-changing circumstances also present new opportunities. For example in recent years, energy systems have been marked by profound technological and market changes, including free trade agreements, new energy marketers, combined-cycle gas generation, more effective wind and biomass technologies, new dispersed load management

systems, and many others. If we are to take advantage of these developments and continue to stimulate innovation, we must create a new, more open, and more flexible market and regulatory environment.

For all of these reasons, the Public Service Board concludes that significant structural, financial, and regulatory reform of the Vermont electric system is now essential. We also believe that Vermont will be best served by charting its own plan of action, and not merely by reacting to changes imposed by the federal government, the region's largest utilities, neighboring states, or other entities. We have a strong foundation upon which to build; however, it is time to improve the existing industry structure in order to better serve Vermonters in the future. In this Plan for Customer Choice, the Board proposes a nine-part plan of action to meet these challenges by restructuring Vermont's electric system. Our principal goal is to harness the creative forces of competition and choice, while retaining the essential benefits delivered by the existing system, for the good of our economy, environment, and consumers.

This is, of course, a complex undertaking, and we recognize that it cannot be accomplished by any governmental body or interest group acting alone. This Plan for Customer Choice is the result of many months of diligent effort by many participants in the Restructuring Roundtable, Workshops, and Technical Conferences: utility managers, business leaders, consumer and environmental advocates, governmental officials, and technical experts. Legislative leaders have worked to stay informed on these issues, and now will face a set of key decisions. We remain committed to working with the Executive Branch, the Legislature, and with all of the participants in this process to further refine this Plan, to make the statutory and regulatory changes necessary to achieve its goals, and to implement it over the transition period that lies ahead. Although that transition is only beginning, already it is clear that the promises of competition—lower energy costs, new and better services, and greater customer choice—are within reach: goals that can be achieved by concerted action to enhance Vermont's future.

II. Overview of Proposed Plan

Giving Vermont's households and businesses the opportunity to choose their electricity providers requires a fundamental change in the monopoly franchise status of our existing utilities. Our plan for the comprehensive restructuring of the electric industry in Vermont envisions a sector that, broadly speaking, will be marked by competitive markets (both wholesale and retail) for generation, and by regulated monopolies for the transmission and distribution of that competitively-produced power and energy. In general, the participants in this docket share that vision, and have offered a variety of proposals for its achievement. Our plan builds on those proposals, and lays out a course for the transition to competitive electricity markets that is deliberate, equitable, and achievable. The plan is also built upon the Vermont Restructuring Principles, produced through the Competition Roundtable and adopted by the Board last May to guide the restructuring process. See Appendix E.

It goes without saying that restructuring an entire sector of the economy, particularly one "affected with the public interest," is a monumental and extremely complicated endeavor. Its ultimate resolution should be seen as a comprehensive package of agreements and policy initiatives, a balancing of sometimes competing interests and public policy considerations. For example, the resolution of a specific issue may be appropriate only in the context of other determinations, and may not be suitable under alternative proposals. In light of the interrelated nature of the issues involved, we strongly encourage the participants in this docket to continue to work together to forge comprehensive solutions on a consensus basis wherever possible. A lack of complete consensus, however, must not be permitted to stifle meaningful progress. We accept our responsibility to resolve disputes on utility issues through orders, rules, or legislative recommendations, consistent with Vermont law and our mandate to supervise the "manner of operating and conducting" the electricity industry "so as to be reasonable and expedient, and to promote the safety, convenience and accommodation of the public." 30 V.S.A. § 209(a)(3).

Many key features of this plan could be accomplished only through the concerted efforts of many parties, and only after essential legislative action and statutory revisions have occurred. For purposes of clarity and simplicity in presentation, we have not attempted in this draft to identify in the text each of the legislative changes that would be necessary to implement our recommendations and bring this plan fully into effect. However, we fully recognize that fundamental policy decisions about the structure of the electric industry are, at base, matters for legislative debate and decisions. For the guidance of all parties, and as an aid to the legislative process, a summary of recommended statutory changes has been included in

an appendix to this plan. Detailed legislative proposals are being prepared in consultation with the Administration and legislative leaders.

Our plan consists of nine interrelated components which together promise benefits for consumers and providers alike. Restructuring under this plan will:

Provide Customer Choice. Consumer welfare increases as the range of service options expands, and competitive markets offer the greatest range of choices, both of providers and products. Our plan will enable all customers to demand and purchase the products and services that they need and want, not merely those offered by a single supplier. We propose that customer access to competitive retailers of electricity be permitted as early as January 1998. Our plan also provides for additional market opportunities for low-usage customers. See Section IV.

Require Vermont's Largest Investor-Owned Utilities to Divide Their Generation and Distribution Functions into Separate Corporate Subsidiaries. This "functional separation" of the companies into wholly-owned subsidiaries, with associated rules determining how they interact with each other, will prevent owners of essential bottleneck facilities (in this case, the wires) from exploiting those facilities to the advantage of their competitive affiliates. We do not propose full corporate divestiture at this time. See Section V.

Provide for the Equitable Treatment of Stranded Costs. The transition to competitive generation markets will likely render a significant portion of utilities' existing investments uneconomic or "above market." Our plan will deal with these costs in two linked ways:

- By promoting aggressive actions to reduce utilities' current and future power costs. These mitigating actions may include innovative financing, renegotiation of above-market contractual commitments, and asset sales.
- By providing utilities the opportunity to recover their legitimate, remaining stranded costs. The total value of utilities' stranded costs has yet to be determined; in so doing, we will take into account the circumstances under which those costs were incurred and the companies' efforts to mitigate them. Companies that succeed in mitigating a significant portion of their current, legitimate above-market costs and that can commit to competitive prices will have the greatest likelihood of recovering their total remaining stranded cost exposure.

See Section VI.

Recognize the Unique Attributes of Municipal, Cooperative, and Small Investor-Owned Utilities. The customers of Vermont's non-profit and smallest privately-owned utilities should also have access to a competitive market for generation services. However, the public nature and corporate structures of these utilities require that different restructuring approaches be adopted for them. Our plan requires that these utilities provide open access to competitive energy providers, but does not require functional separation of activities. They will also be

required to take all reasonable steps to mitigate their stranded costs, but the ultimate determination of their total stranded cost exposure will recognize the unique aspects of their current financial obligations. See Section VII.

Assure Consumer Protection. We adopt the recommendations embodied in the participants' consensus filing and in the proposal of the Department of Public Service ("Department" or "DPS") for a "Consumer Bill of Rights." Implementing these proposals will preserve the wide range of consumer protections currently provided by the franchise system, including fair disconnection rules, service quality standards, and privacy rules. In addition, we propose new initiatives to assist low-income customers. See Section VIII.

Deliver Cost-Effective Energy Efficiency Programs to all Customers. Restructuring offers new opportunities to develop market-based energy efficiency programs but, even so, we recognize that the market will fail to capture all cost-effective energy efficiency resources that could be tapped for the long-term benefit of the Vermont economy. Therefore, we propose several complementary approaches to delivering energy efficiency to Vermont's electric consumers:

- By requiring distribution utilities to provide energy efficiency measures that will reduce their total costs of delivering electricity to customers within their service territories;
- By promoting performance standards for new construction, appliance standards, time-of-sale efficiency upgrades for existing dwellings, and lighting codes, among others;
- By increasing the availability and marketing of high-efficiency alternatives to conventional electric products, thus transforming the market for particular energy-using devices; and
- By funding the delivery of essential state-wide efficiency programs through a small non-bypassable charge on all electricity consumption in Vermont. These programs will capture cost-effective energy-efficiency savings through competitive bidding supervised by one or more "efficiency utilities" certified by the Public Service Board.

See Section IX.

Promote the Continued Use and Development of Renewable Energy Resources. Like energy efficiency, renewable energy technologies provide long-term diversity, environmental, and sustainability benefits that competitive markets do not fully value. We propose several complementary mechanisms that will, at a minimum, maintain Vermont's long-standing reliance on renewable resources:

- By requiring all retail companies selling electricity in Vermont to secure a minimum percentage of their sales from renewable resources. This portfolio requirement will be structured so as to preserve the state's existing levels of renewable electric generation and to promote the development of technologies that are now very close to commercialization. In addition, the portfolio requirement will be facilitated by the use of tradeable credits, earned through the sale of renewable energy to Vermont end-users. This market-based approach

will assure that cost-effective renewable energy is delivered in the state; and

- By promoting research and development of promising new technologies through the creation of a very small non-bypassable charge on all electricity consumption in the nation. In the alternative, a similar charge on Vermont consumption should be implemented, with the funds raised to be contributed (along with similar monies from a significant number of other states) to a regional or national R&D program.

See Section X.

Promote National and Regional Policies that Assure Environmental Quality. Today, Vermont maintains a relatively clean portfolio of generation resources, but we are not insulated from the environmental impacts of electricity generation outside our borders. We propose a multi-part plan to mitigate these effects:

- In order to sell electricity in Vermont, retailers will be required to (a) disclose relevant information about the composition and environmental impacts of their generation portfolios, (b) satisfy the renewables portfolio obligation (see Section X), and (c) satisfy an emissions portfolio requirement that will monitor and limit air emissions associated with electric consumption in Vermont.
- Cost-effective investments in energy efficiency will be promoted through a variety of mechanisms, thereby reducing the need for environmentally damaging generation (see Section IX).
- We will propose and support federal legislation that promotes protections at the regional and national levels. Such proposals include the imposition of environmental comparability requirements on older generation sources (frequently referred to as "old source review") and the creation of an inter-regional emissions trading program, similar to the national program for sulfur dioxide emissions control. We also support current Environmental Protection Agency ("EPA") initiatives with respect to improved standards for toxic air emissions, and we believe that the Federal Energy Regulatory Commission ("FERC") should be given environmental review authority under the Federal Power Act.

The restructuring of the electric industry offers a "once in a lifetime" opportunity to permanently lower the environmental impacts of electric generation, by creating new, broad-based and efficient mechanisms to reduce those effects. An essential element of Vermont's Plan for Customer Choice is to continue our work both within Vermont and at the regional and national levels on environmental protection and improvement. See Section XI.

Establish a Regional Independent System Operator and Power Exchange. Vermont is interconnected to the New England transmission grid, which is currently managed by the New England Power Pool. For the regional generation market to operate fairly and effectively in a new competitive environment, it is essential that transmission facilities be controlled by a truly independent system operator ("ISO"), which will maintain overall system reliability, assure equal access to the grid, and take actions to prevent the exercise of market power by dominant providers. The ISO should also have responsibility for transmission pricing and planning. We

also propose the establishment of a regional power exchange to provide a short-term spot market for energy services and other services necessary to support system reliability by the ISO. See Section XII.

III. PROCEDURAL HISTORY

In October 1994, the Board and the Department of Public Service convened the Vermont Roundtable on Competition and the Electric Industry, with the aim of developing a broad-based consensus on the nature and manner of restructuring Vermont's electric industry. Represented at the Roundtable were a wide array of interests: utility companies, large commercial customers, representatives of low-usage consumers (residences and small businesses), regulators, environmental groups, and low-income advocates. That process ultimately led to the establishment and later adoption by the Board of the "Vermont Principles for Competition in the Electric Industry" ("Vermont Principles"), which identified the essential public and private goals that should give direction to the restructuring process. See Appendix E. Similar statements of principles have been established in other states and by the National Association of Regulatory Utility Commissioners ("NARUC").

On October 17, 1994, we opened this investigation, with the aim of advancing restructuring through an open, more formal process. It has proceeded in two stages. The first stage included workshops with the Board and collaborative negotiations among the participants that built on the achievements of the Roundtable. This work culminated in consensus filings on a range of issues in March of this year.[1] The second stage involved an intensive period of information exchange and Technical Conferences held before the Board. The Participants' restructuring proposals and responses were filed in June and July, accompanied by two weeks of Technical Conferences in early July. On the basis of the detailed filings and discussions during the technical conferences, this Board issued a Draft Report and Order on October 16, 1996. We have received detailed comments from the participants in this investigation and from many other interested persons during a statewide, interactive, televised public hearing on December 11, 1996, and at numerous meetings and public conferences over the past few months. On the basis of all of the comments received on our Draft Report, we reach the conclusions set out in today's Final Report.

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1. The Roundtable members designated a negotiating group, which divided itself into three subcommittees: the Consumer Protection & Low Income Subcommittee ("CP&LIS"), the Energy Efficiency Subcommittee (which also took up questions of renewables and the environment), and the Stranded Cost Subcommittee. Each of these subcommittees submitted a consensus filing on March 25, 1996.

Readers should note that much of the citation format used in this Report, such as "CP&LIS", above, relies on participant filings that are identified in Appendix B, p. 155.

The efforts of the participants have been dedicated and thorough. In many areas there is substantial agreement among a range of participants on the proposals put forth. We recognize that providing customer choice in Vermont is much closer to becoming a reality because of the hard work that the participants have done, in cooperation and for the common good. This process has been very effective in identifying the key issues we face in sharing information among participants and in developing creative solutions and proposals. If the General Assembly accepts these recommendations, we will begin the significant and complex task of implementing structural reform. This Board is committed to taking whatever actions may be necessary to implement the legislature's directives and to deliver the promise of a more flexible, lower-cost, publicly-responsible electric industry to the households and businesses of this state.

A number of participants have asked us to confirm their understanding that today's Report and Order will not constitute a final, binding, appealable order on all issues that it touches upon. These participants are correct. As we noted in our Order opening this investigation, this has not been a contested case proceeding.[2] This final Report and revised Order does not make any final determination of the substantive legal rights and obligations of the participants. Instead, the purpose of this Docket to date has been to assist the Board in preparing a recommendation for the Vermont legislature, and to allow interested persons to participate in the development of that recommendation.

However, today's Order does order certain filings and other procedural actions by participants, particularly regulated utilities subject to supervision and filing requirements under 30 V.S.A. §§ 18, 30, 203, and 209. As with any procedural order issued by the Board, these requirements are binding on the participants to which they are directed.

A. Summary of Changes in the Final Report

Many participants filed comments on our Draft Report and Order. The responses were very thoughtful, generally supportive of our proposals, and extremely helpful in our deliberations on the final plan. As a consequence, this plan differs from the original draft in several significant ways, summarized below.

First, the Department and the Agency of Natural Resources ("ANR") point out that the environmental initiatives proposed in the Draft Plan could be strengthened through the addition of an emissions portfolio requirement. The Department also notes that the Board's proposal could be further improved by adopting generation disclosure requirements for all retailers of

2. Order, 10/17/96 at 5.

electricity in Vermont. We agree with both recommendations and have amended Section XI to include them.

Second, the Board received considerable comment on its proposed two-year phase-in of open access. The DPS and Green Mountain Power Corporation ("GMP"), for example, continue to recommend full implementation of direct retail access on January 1, 1998. Others, including Enron and the Vermont Electric Consumers Coalition ("VECC"), urge the Board to set a target for early 1998. The Associated Industries of Vermont ("AIV") and Washington Electric Cooperative ("WEC") support the Board's original proposal. The Conservation Law Foundation ("CLF") does not endorse phased access, but encourages retail access for all customers simultaneously. As set out in Section IV, we have modified our original proposal to recommend that, by no later than the end of 1998, direct access should be available to all Vermont customers. We agree that a prolonged phase-in may be undesirable and may create unnecessary consumer confusion. Nevertheless, we remain concerned that a complete cut-over on the same date may overly strain as yet untested consumer information and other support structures. We propose a timely cut-over to be completed in 1998, once the prerequisites have been met, and we remain open on the question of whether this is best accomplished through a phase-in or through a full cut-over on a specific date during 1998. In response to comments by CLF and the municipal utilities, we have also clarified our intent that any phase-in should be implemented equitably across all customer classes.

Third, we have placed greater emphasis on issues of information disclosure and consumer education throughout the document. These changes respond to concerns raised by the Department and other commenters, including members of the public who spoke at the public hearing. As discussed in Section IV, we ask the Department to take a leadership role in this area, and request that it file by mid-February a plan for a customer education and information campaign.

Fourth, we further clarify our objectives in proposing direct access and customer choice at this time. The Vermont Low-Income Advocacy Council and Washington Electric Cooperative suggest that the restructuring process has not sufficiently examined whether reform of the existing electric system is necessary at all. As we stated in our Order of May 24, 1996, we have concluded that substantial benefits can be achieved for Vermonters through restructuring and customer choice and, in Section I, we explain in greater detail why we have reached this conclusion.

Fifth, a number of participants commented on our proposal for a renewables portfolio standard ("RPS"). Many of the comments raised concern over the potentially broad reach of the standard to include renewable technologies that potentially did not meet the underlying goals for establishing such a standard. We have addressed these comments by more clearly

defining our goals for the standard, and excluding resources that do not meet it. We also note that resolution of certain questions about the RPS will depend upon facts adduced in later proceedings.

Sixth, concerns over the establishment of a "Continuing Service Offer" were expressed by several participants. GMP raises questions about its underlying purpose and, given the firm rate standard for the service established in the Draft Plan, the potential for such a service offer to be confiscatory for the utility. We have revised our discussion of the Continuing Service Offer in Section IV to clarify its purpose and to modify the rate standard established for the offer. We also state our intention that the Continuing Service Offer obligation should extend no further than 2001 and that there should be some flexibility as to how the offer can be satisfied by utilities.

Seventh, a number of participants, including the Vermont Low-Income Advocacy Council, reiterate their concerns about the implications of customer choice will have for smaller-volume customers. They question whether small customers can expect any tangible benefits from the changes proposed. We have revised our proposals in Section IV to provide additional regulatory assurances that small-volume customers will have equal access to the benefits of competition and will receive bill reductions comparable to those of large-volume customers.

Eighth, most of the utilities asked that we confirm that this Report and Order does not constitute a final, binding, appealable order on all issues that it touches upon. We concur, as we have already noted earlier in this Section. The purpose of the docket to date has been to assist the Board in preparing a recommendation for the Vermont legislature, and to allow interested persons to participate in the development of that recommendation.

Ninth, we invited and received considerable comment on the need for further changes to Vermont's transmission network and, in particular, on changes to the Vermont Electric Power Company ("VELCO") that may be necessary to address potential competitive concerns in a restructured environment. We agree with VELCO and others that changes in the New England region will have significant bearing on the potential for existing generation owners of the VELCO system to use their ownership or control of VELCO to their own advantage, contrary to fair competition standards. Consequently, it is premature now to make any recommended changes to VELCO or its governance. As discussed in Section V, we will look to VELCO and the Department to identify ongoing opportunities and concerns for VELCO as the developments unfold in the region. We have requested that VELCO and the Department file comments on these issues in the coming summer, in conjunction with the initial "Utility Restructuring Plans" of the utilities.

Tenth, Burlington Electric Department submitted detailed comments on the question of the extent to which municipal distribution companies should be required to divest or functionally separate their competitive resources and activities. We have addressed these concerns by making it clear that neither divestiture nor functional separation is required for municipal utilities, and by suggesting where the appropriate balance between taxpayer risks and reasonable market participation by the municipal Disco lies and how that balance should be maintained.

Also, throughout the document, we have tried to clear up points of confusion or uncertainty noted by the participants. We have refined our definitions of certain key concepts. We have clarified our proposals on Disco network unbundling, the initial certification requirements and the on-going regulatory obligations of competitors, and the rationale for continuing price regulation of competitive affiliates during a transition period. We have refined and expanded the concepts and principles laid out in our discussion of stranded costs (including the addition of a competitive safeguards criterion in their evaluation), and have extended, by one year, the proposed transition period before a final determination of stranded costs is made. We have also explained our intentions with respect to several of the rights embodied in the consumer "Bill of Rights."

And, lastly, changes were made to the procedural schedule. The intended starting dates for several of the follow-on proceedings have been extended in response to concerns over timing and participants' resource constraints.

This Plan is the result of many people's labors over more than two years. Their careful analysis and creative thinking have been invaluable to us, and we are grateful to them. Implementing this Plan will require additional, sustainted effort, and we look forward to continuing our work with all the participants in the months ahead.

IV. Providing Retail Access to Vermont's Consumers

Electric utilities in Vermont have historically operated under exclusive service territory franchises for virtually all aspects of retail electric service delivered to, and including, the customer's meter. As noted previously, the reasons for granting companies exclusive franchises for *both* power generation services and retail delivery no longer apply. We conclude that direct access for retail customers to alternative retail and generation service providers will serve the public good and will, over the long term, provide better service at lower costs to consumers. We further conclude that it will still be appropriate to maintain exclusive geographic "wires" franchises for the *delivery* of competitively-produced power—that is, that distribution companies ("Discos") should remain regulated for the foreseeable future.[3] We recommend that existing statutes that relate to the nature of the franchise be modified to permit direct customer choice and to limit exclusive franchises to monopoly distribution services.

A. Customer Choice

"Retail Access" and "Customer Choice" denote the ability of electricity consumers to decide what services to buy and from whom to buy them. Customer choice will provide Vermonters with benefits that have not historically been available in this state. A market stimulated by retail access can offer the broadest possible range of both service providers and products. It will also compel firms to search for new and more efficient ways to meet customer demand and to improve profitability. At the same time, however, the change in the market will raise a number of consumer protection and public policy issues that the Board considers critical to the success of restructuring. See Section VIII.

In general, the new rights associated with retail access will be accompanied by certain consumer responsibilities. Ultimately, consumers of electricity will require relevant, objective information and better access to it in order to make knowledgeable choices about products and providers. We conclude that a number of potential burdens can be avoided by, for instance, assuring that consumers have the right to join together to form larger purchasing groups and ensuring that companies engage in responsible marketing. A restructured industry should also provide certain "safety-net" product assurances. The following discussion outlines a number of particular issues that need to be addressed in order to assure fair and effective customer

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3. Distribution services ("Disco services") are provided at the lowest cost when provided by a single service provider. That is, these services remain natural monopoly services, and should be regulated as such.

access to the market: proper timing of customer choice, information needs, transition service offerings, provider of last resort, and retail aggregation.

B. Timing of Customer Choice

Consistent with the Vermont Principles, we start with the premise that our Plan for Customer Choice should not favor one class of customers over any other. Opportunities for competitive choice should be available to all customer classes at the same time. However, providing customer choice to all Vermonters at the same time raises practical considerations about the administrative feasibility of doing so.[4] Ideally, consumer education, key operational structures, and certain competitive and consumer protections should be in place prior to implementing customer choice.[5]

In addition, as many participants in this investigation have pointed out, Vermont should, to the extent possible, set a schedule for restructuring and direct access that is consistent with those of other states in the region. Several states have plans for initiating direct access as early as 1998.[6]

We conclude that direct access to all Vermont retail customers should be permitted on a scheduled phase-in starting in early 1998 and completed by the end of that year. Any phase-in

4. We anticipate that consumer confusion and competitive abuses may be greatest during the earliest stages of the transition.

5. The specific educational, administrative, and institutional prerequisites to implementing retail choice will be identified at a future stage in this proceeding. There may be technical constraints relating to developments at NEPOOL or its successor ISO that deserve consideration in establishing a specific date for retail cut-over (*e.g.*, end of the power year and determining capability responsibility). At a minimum, consumer educational programs should be in place, the existing utility service offers should be unbundled to distinguish monopoly services and non-bypassable charges from competitive service opportunities, certain minimum protections against vertical market abuses by incumbent providers should be established, standards and rules for certification of competitive retail service providers should be set, and the Continuing Service and Basic Service Offers of each Disco need be established by Vermont's electric distribution companies. Establishing a specific list of prerequisites will be a first order of activity in the next phase of this investigation.

6. Limited pilot projects are taking place currently in New Hampshire and Massachusetts. Rhode Island recently passed legislation that would give retail choice to the largest-volume customers in the summer of 1997.

should be pursued in a manner that does not favor one customer class over another.[7] The precise start and completion of the phase-in should take into account the institutional,[8] operational, and educational prerequisites discussed below, as well as plans of neighboring states. At this time, we believe that a transition to direct access for all Vermont customers should be completed as quickly as possible. To delay access for some Vermonters could contribute to consumer confusion. A lengthy transition to direct retail access would also raise some fundamental equity concerns for consumers. We therefore conclude that the phase-in should be completed by the end of 1998.

C. Meeting Customers' Information Needs

Effective access to the market for those consumers with less buying power than large businesses or industry can be met through various means. Ultimately, consumer knowledge will be key to determining the extent to which consumers participate and benefit from the competitive market. There are a number of ways of enabling consumers to effectively access, manage, and understand information presented in these markets. Several are discussed below.

First, the Board supports the development of a transparent, "short-term" or "spot" market from which all customers can purchase. From the consumer's perspective, markets provide easy access to products and services available from competing providers. A spot market for electricity both offers access to short-term electricity and sets a "benchmark" price for other, longer-term products. Creating an open market without a transparent spot market will likely work to the disadvantage of smaller consumers who lack the resources, knowledge, and incentives (*e.g.*, the prospect of significant savings due to their smaller relative purchases) to enter into bilateral contract negotiations with competitive generators.

It is also important to lessen the potential for confusion and to reduce information burdens imposed on consumers. For instance, it is likely that distribution service providers ("Discos") and generation service providers ("Gencos" or "Retailcos") bill separately for their services. (Refer to Section V, below, for a detailed discussion of corporate structure and market entities in a restructured industry.) Potential problems associated with multiple bills can be substantially reduced by creating standards for the consistent presentation of information, such as defined billing units for specific services.

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7. The specific mechanism for accomplishing this will be set in a future phase of this proceeding. The mechanism may be (1) a point-in-time cut-over provided all prerequisites have been met statewide, (2) through a lottery assignment of customers similar to the New Hampshire Pilot, or (3) through a utility-by-utility service area phase-in.

8. *E.g.*, an effective and independent system operator of the regional transmission system.

As discussed in Section V, certification of retail service providers will include certain disclosure requirements in support of the customers' right to know the price terms and generating characteristics of competing power sources. We conclude that disclosure of generation sources and their emissions characteristics will be essential for consumers to effectively reveal their product preferences. The specific requirements for certification will be established at a later phase of this investigation.

As markets for energy services expand, availability of information and ways of acquiring it should likewise expand. Distribution companies, retail providers, and governmental agencies will all have an interest in facilitating such information exchange, perhaps through internet access to electronic bulletin boards. We encourage the utilities, the Department, and other participants to work cooperatively in future stages of this investigation to develop requirements for the types of information that should be made available by retailers, distribution companies, and other participants in the market, along with mechanisms for providing this information to the public.

We request that the Department prepare a program of consumer information and educational initiatives, complete with clear objectives relating to consumer needs, plans for implementation, and funding requirements to assist the Board in future stages of this investigation. We request that the Department submit this plan as an informational filing by February 15, 1997. We understand, however, that the need for greater public awareness of the changes being proposed may require action prior to Board review of the DPS's plan. We encourage the Department to develop and implement a program for public education, in cooperation with utilities,consumer advocates, and other participants as necessary. We recognize that such a campaign will require a defined source of funding. Ideally, funding for these programs should treat all competitive providers equitably[9]

D. Required Transition Service Offerings

During the early stages of the transition to a restructured industry, we expect companies to begin offering a variety of consumer options. However, we also expect that customer confusion could deter aggressive shopping by some customers. In the interest of assuring benefits to all classes of consumers during the transition, all existing Vermont distribution utilities will be required to maintain existing services at rates below current projections of tariffed levels over the transition period. These service offers will be referred to as the "Continuing Service Offers" ("CSO") of the Disco and will be available only to the Disco's traditional franchise utility customers over a transition period. See Section XIII, p. 144.

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9. Pending the development of competitive providers we encourage the Department to rely on existing funding mechanisms, including existing sources and billbacks to electric utilities.

The fundamental purpose of the CSO is to (1) provide some continuity of service to traditional utility customers during the transition period to a competitive market and (2) provide a mechanism for assuring some additional price stability in a period of considerable uncertainty in the market for generation services.

CSOs would ideally be served by competitive retail providers, as may be established through a competitive bid, for those portions of the service subject to competitive markets. They could also be served by the pre-existing generation resources of the original utility (*i.e.*, the resources retained by the Disco or its affiliates) with market prices used as a benchmark for setting price levels or for determining stranded costs. Stranded cost recovery will be managed in such a way so as to assure that these services can continue to be provided under the tariffed terms and conditions.

The CSO obligation of the Disco will terminate by the end of 2001 or when an effective market for retail service has been established, whichever occurs first. Other details of the CSO can be established on a utility-specific basis or in future phases of this investigation.

E. Provider of Last Resort

Electricity is an essential service, critical to the health and safety of Vermonters. In order to protect consumers against unnecessary service disruptions during and, possibly, after the transition to competition, all distribution utilities will be required to establish or designate a "basic service offer" for each class of customers. This offer will be made available over a contracted period, through a retail service provider, to all customers. Terms of service will be established through a market determination. The offer will be limited to the franchised customers of the Discos. For purposes of disconnection, the Basic Service Offer will be considered a Disco service.

The Basic Service Offer need not be distinct from the pre-existing tariffed service offers that constitute the Continuing Service Offer (see Section XIII, p. 145). This service obligation, will, however, need to extend beyond the transition period, and it may be provided through an affiliated retail service company. This will be possible provided that its rates are determined through an open, competitive bidding process managed by the distribution company or through some other appropriate market-based determination (ultimately, reviewed by the DPS and Board).

F. Retail Aggregation

As a means of increasing their purchasing power and range of market opportunities, residential and small business customers must be able to aggregate their loads as they enter competitive energy markets. We have received several proposals designed to enable

consumers to combine into groups in order to increase their buying power. The Department has recommended that no restrictions be placed on consumers' ability to obtain service through such groups. Also, several parties have underscored the importance of always allowing customers to choose their provider, even after having joined with others in a retail "cooperative." Other participants have proposed models for statewide organizations designed to aggregate customer buying power. Municipal utility representatives have proposed one or more "Municos" that could offer service beyond the service territories of these utilities. Advocates for small consumers and one of Vermont's cooperative utilities have proposed the "Consumerco," a public-purpose entity intended to offer a wide range of energy services to residential and small commercial customers.

We conclude that, once direct retail access is established and consumers are free to choose their retail providers, there should be no restrictions on the ability of consumers to join with others to form retail service purchasing entities. Furthermore, customers should be permitted to withdraw from such aggregation entities upon their own initiative, subject only to reasonable and freely agreed-upon terms that do not impair fluid markets.

We also support the creation of non-profit entities chartered to provide customers with a greater variety of service options. The Consumerco proposal is fully consistent with a competitive market and, furthermore, promotes the development of such a market.[10] As noted by its proponents, the Consumerco does not require subsidies from other ratepayers. In stating our support for the Consumerco concept, we do not intend to provide the Consumerco with any regulatory advantage, *e.g.*, through ratepayer subsidies or less stringent certification requirements, over other market participants.

Such an entity or entities may evolve naturally from proposals for Municos or as a retail affiliate of an established cooperative utility. While we do not wish to prejudge consumer behavior, we do conclude that the early establishment of a statewide entity with a public purpose mandate is likely to attract substantial consumer interest.

G. Rate Assurances for Small-Volume Customers

Over the course of this investigation, the potential impacts of direct access and customer choice on small customers has been a focus of concern. Principle 10 of the Vermont Principles establishes that an equitable distribution of benefits must extend to all classes of consumers. The experience of other industries, and the information presented by many participants in this investigation convinces us that restructuring can deliver benefits—price, value, and choice—to all classes of customers. Our Plan includes a broad array of

10. The Consumerco concept was advanced by Mr. Samuel Press, who served as an Independent Consumer Advocate on behalf of the Department of Public Service. See, Press, 3/25/96 at 10-12, and 7/3/96.

mechanisms to help assure that small-volume customers will indeed benefit. These include the Continuing Service Offer; eliminating barriers to retail aggregation; customer education and customer "right to know" standards; statewide sales authority for cooperatives and municipal utilities; and a variety of other consumer protection initiatives. As we have already stated, we also believe that the early establishment of a transparent spot market and provider disclosure requirements will improve the ability of small consumers to participate more effectively in the market. While we believe that these assurances will prove adequate to address small consumer issues, we remain committed to assuring that *all* consumer classes benefit from restructuring. If necessary, we intend to exercise reasonable regulatory discretion to help assure that comparable electricity bill savings are realized by all customer classes. This discretion will be exercised in reviewing rate cap proposals; in establishing the rates for the Continuing Service Offer; in setting distribution service charges; in targetting programs for funding energy efficiency; and through stranded cost determinations.

V. CHARACTER OF INDUSTRY AND CORPORATE STRUCTURE IN VERMONT

As we stated in our Order of May 24th, competitive electricity markets will be successful only if no participant is able to exercise undue market power.[11] Market power refers to the ability of a market participant to unilaterally influence market prices to its own advantage, to the detriment of customers and, often, other competitors.

There are two broad categories of market power that must be effectively addressed before any meaningful restructuring of the electric industry can occur. One is horizontal market power, which refers to the ability of a dominant firm (or firms) to control production and therefore manipulate prices—for example, an electric generating company that controls a large share of the regions's generating facilities and currently distributes power to a significant portion of the region's customers. This issue is taken up in Section XII, p. 130. The other is vertical market power, which is the ability of an existing firm to erect barriers to entry or otherwise shift costs and revenues among affiliates in ways that distort efficient market operation.[12] For example, in Vermont, this describes a local electric utility that currently generates (or purchases) power and distributes that power over wires that it owns to all customers in its service territory. In this section, we are concerned with the question of vertical market power and the ways in which its potential abuses can be prevented in an emerging competitive market.

A. Separation of Competitive and Monopoly Functions, and Problems of Vertical Market Power

A firm that owns and operates facilities in all phases of the production and delivery process is said to be "vertically integrated." In the US electric industry, most utilities are vertically integrated, in that they own or control generation, transmission, and distribution assets, all with the aim of delivering electricity to ultimate customers in their service territories. The premise justifying electric restructuring—that the economics of generation are such that competitive provision is now possible—does not extend to transmission and distribution ("T&D") services. Potential vertical market power abuses arise from the ability of a firm to exploit its control of transmission and distribution facilities, to which all retail providers must have access, to the advantage of its own retail sales of electricity. The unfair exploitation of monopoly bottleneck facilities, such as transmission and distribution, is the problem posed by electric utilities that operate in both competitive and regulated monopoly arenas.

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11. Order, 5/24/96 at 34.
12. *Id.* at 34-35.

Specifically, there are a number of ways that a transmission or distribution entity could act to favor its generation affiliate, among them the following:

- Preferential pricing of transmission and distribution services;
- Discriminatory information flows;
- Inappropriate risk allocation among affiliates;
- Discriminatory use of shared resources;
- Discriminatory treatment of regulated costs and services;
- Discriminatory service and service quality;
- Discriminatory planning and resource deployment; and
- Discriminatory marketing by the regulated entity.

As a general matter, the participants in this docket agree that the separation of a firm's monopoly functions from its competitive activities offers the greatest protection against vertical market power abuses. We concur. Broadly speaking, the participants all propose an industry structure made up of generating entities ("Gencos"), transmission providers ("Transcos"), distribution providers ("Discos"), and, in most cases, retailers of electric energy services ("Retailcos"). Gencos and Retailcos would operate in competitive markets and would not be price-regulated (although certain terms and conditions of service may well be regulated). Transcos and Discos, as owners of monopoly facilities, would remain price-regulated.

The participants disagree, however, on the precise nature and extent of the necessary separation between competitive and non-competitive elements. There are three broad types of potential corporate separation. The first is full divestiture of a firm's several, distinct activities into separately owned and managed companies; the price-regulated T&D firms would be prohibited from owning generation or selling electricity in competitive markets.[13] The second, often referred to as "functional separation," refers to a structure of wholly-owned subsidiaries: utilities would be divided into separate firms according to activity area, but these subsidiaries would be completely owned by a single holding company. Detailed rules and processes for accounting, inter-affiliate transactions, and the shared use of assets and personnel would be implemented. The third type of separation is one where a firm breaks itself into various divisions or departments, but does not create distinct corporate subsidiaries; and, as with functional separation, it would be necessary to institute rules for accounting, intra-company transactions, and the shared use of assets and personnel.

Today, we conclude that, although full divestiture offers certain benefits, it is not necessary at this time. We reach this conclusion for two major reasons:

- Full divestiture of generation resources at this time might remove opportunities for mitigation of potentially strandable costs, and

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13. Except perhaps in limited circumstances, having to do with the offering of a basic service package. See Section IV, above.

- It might delay progress toward customer choice at a time when utility cooperation is critical to the effective evolution of the industry.

We conclude that, in place of divestiture, functional separation of the state's largest investor-owned utilities should be required.[14] We believe that a set of rigorous protections, described in more detail below, will be necessary, but sufficient, at this time to address the competitive concerns of vertical market power. The protections must be such that transactions among the corporate affiliates will be traceable and transparent; in addition, appropriate codes of conduct must be implemented that will assure non-preferential treatment of competitors by a firm's regulated transmission and distribution companies. Such safeguards, which also include the creation of a truly independent operator of the regional transmission system, will address many of the potential concerns raised by the participants.

We therefore direct the utilities to file detailed plans in June 1997 that describe the manner in which they will reorganize their corporate structures to, at a minimum, functionally separate their competitive generation and marketing activities from their regulated transmission and distribution services.

1. Corporate Structures

a. Divestiture (Corporate Unbundling)

Several participants, the Department chief among them, argue that full divestiture of a firm's generating assets from its monopoly facilities will best address problems of vertical market power.[15] They propose that Vermont's utilities divest themselves of their generation assets (or, alternatively, of their T&D facilities), and that Gencos be proscribed from owning or controlling any transmission or distribution assets. Gencos would, however, be allowed to own their own retail operations, enabling them to market and provide services directly to end-

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14. At a minimum, this conclusion applies to CVPS and GMP. Citizens advises us that for it (a division in a multi-state holding company), under current federal law, functional separation may in fact require full divestiture. This question will be more fully examined later in this, or another, proceeding. Vermont Marble Company and Rochester Electric Light & Power Company will not be subject to the same requirement at this time. Because of their small size and unique circumstances, the administrative and financial costs that functional separation would impose upon them would likely overwhelm any hoped-for benefits.

15. DPS, 3/26/96 at 23; DPS, 6/19/96 at 10.

users. The Department also recommends that a set of financial incentives linking the magnitude of stranded cost recovery to divestiture be implemented.

Other participants, Central Vermont Public Service Corporation ("CVPS") and Green Mountain Power Corporation ("GMP") in particular, assert that, while divestiture may achieve the stated goal, it is neither feasible nor necessary at this time.[16] Other mechanisms are available that will achieve the same result and do not require such extreme measures.

Specifically, CVPS argues that mandated divestiture would constitute a "taking," which would require just compensation.[17] CVPS and GMP also argue that divestiture would strip the utilities of the ability to mitigate their stranded costs, prevent them from providing a "guaranteed customer offer," and deprive ratepayers of the benefits of economies of scope associated with vertical integration.[18] CVPS asserts that corporate unbundling would not allow it to "maximize the value of its assets."[19] Finally, CVPS notes that full divestiture could be ordered in the event that vertical market abuses are demonstrated.[20] The Vermont Electricity Consumers' Coalition ("VECC") adds that divestiture would significantly and unnecessarily delay restructuring.

b. Functional Separation (Operational Unbundling)

CVPS and GMP contend that, instead of divestiture, the functional separation of a utility's regulated and competitive activities into several wholly-owned subsidiaries would, with appropriate rules for affiliate transactions and codes of conduct, be sufficient to alleviate concerns about vertical market power. Furthermore, they argue that such reorganization would be easier to facilitate and could occur relatively quickly, thereby allowing for an earlier introduction of retail competition into their service territories than if full divestiture is

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16. Washington Electric Cooperative, Inc. ("WEC"), 6/28/96 at 5; CVPS, 6/19/96 at 3; GMP 6/19/96 at 5; GMP 12/29/95 at 18.

17. CVPS, 6/19/96 at 4, 32.

18. *Id.* at 3-4, 29; GMP, 6/19/96 at 6, 12; GMP, 12/29/95 at 19.

19. CVPS, 6/19/96 at 31. We are not persuaded by this argument. The major portion of this value derives from a vertically integrated firm's control over essential facilities and bottleneck inputs. Under any reasonable restructuring formula, it would be inappropriate to permit a vertically integrated utility from using its bottleneck facilities in a way that advantages its own generation assets; put another way, in the ideal, returns to transmission assets and generation assets should not differ according to whether a company is corporately or functionally unbundled.

20. *Id.* at 31-32.

required. In contrast, the DPS contends that functional separation and its requisite safeguards would not adequately protect consumers from potential abuses.[21]

c. Non-Structural Separation

A third and least intrusive remedy is non-structural. Instead of divesting or forming wholly-owned subsidiaries, a firm would break itself into various divisions or departments, broken down by specified activity or profit-center. In place of separate corporate entities for its several activities, detailed rules and processes for accounting, intra-company transactions, and the shared use of assets and personnel would be instituted. The obvious pressures to discriminate in favor of one's own firm or to exploit proprietary information in anti-competitive ways are greatest in these circumstances.

2. Corporate Structures: Considerations and Conclusions

We conclude that full divestiture could offer some unique benefits in dealing with the potential of vertical market power abuses in Vermont. Complete corporate separation of competitive and monopoly services would clearly prevent an affiliated Genco or Retailco from gaining undue profits at the expense of the monopoly ratepayers of the Disco. However, there are also potentially negative effects from ordering full divestiture, as well as potential shortcomings of the approach, which could reduce some of its benefits.

First, the proponents of specific approaches to full divestiture were unable to clearly articulate the way in which the benefits of efforts by existing utilities to mitigate stranded costs would accrue to current ratepayers. This is a significant matter, since we expect the benefits of mitigation to be substantial.[22]

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21. DPS, 6/19/96 at 9. The DPS also states that undivested utilities "may be even more attractive for takeover than if divested." *Id.* at 11. GMP counters that Public Service Board approval under 30 V.S.A. § 107 would be required before a Vermont utility could be acquired by another entity. GMP, 7/3/96 at 1. VECC argues that corporate unbundling will make the divested companies especially vulnerable to take-over by out-of-state firms, thereby eliminating a local management presence in Vermont. VECC, 8/2/96 at 2. At this time, we reach no conclusion as to the relationship between divestiture and vulnerability to acquisition by an out-of-state firm.

22. This problem could be resolved in a global settlement. We note that New England Electric System has recently stipulated to a settlement with the Massachusetts Attorney General, the Massachusetts Department of Energy Resources, and other parties. The settlement addresses both divestiture and stranded cost

Second, full divestiture by the investor-owned electric utilities could be a time-consuming undertaking and could unduly delay the entire restructuring process. To the extent that the region and the nation move forward with this effort in a more timely manner, Vermont could lose some of the benefits of restructuring for its citizens and its economy.

Additionally, the Board considered several other factors. Among these was appraisal of the relationship of horizontal market power to vertical market power in the region. With very dominant regional electric companies outside Vermont, it is important to weigh the probability of the full divestiture of large electric companies in New England and the effect on Vermont of the functioning and shape of the regional market under different regional scenarios. Furthermore, Vermont's investor-owned utilities are relatively small in comparison to electric companies nationally: the effect of divestiture on their ability to raise capital or on other size-related attributes of corporations must also be considered.

Finally, full divestiture may not directly address the question of whether the spun-off, regulated T&D company is then free to enter other competitive, *non-electric* markets. If so, then the general set of safeguards relevant to both functionally-separated and non-structurally separated firms will also apply to the T&D company and its affiliates.[23] Consequently, one of the other benefits of full divestiture — reduction of regulatory oversight — may only be partially realized.

In weighing these considerations, we conclude that functional separation with adequate affiliate transactions safeguards, as discussed in more detail below, is appropriate at this time, and that full divestiture is not now required. We also note that resolution of some of the critical questions surrounding industry restructuring will likely depend upon future events and developments elsewhere in the region and nation.[24] If, during (and after) the transition to a

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recovery. The Board encourages and would support similar settlements in Vermont.

23. Here the problem is not that the generation prices that customers pay rise because access to alternative providers has been limited, but rather that the distribution-related prices that they pay have risen because of improper cost allocations among the regulated firm and its competitive, non-electric affiliates.

24. We recognize that functional separation also has the potential to impose some administrative costs not borne by monopoly firms. The separation of a company into wholly-owned subsidiaries will create one-time costs as well as on-going costs associated with defined rules for interaffiliate transactions; it is important that these costs be reduced to the greatest possible extent. Nevertheless, we believe that the benefits of functional separation outweigh such costs (a conclusion we have not reached

competitive generation market, it transpires that functional separation and associated rules of conduct fail to curb vertical market power abuses, it will still be possible for the state to reconsider the question of divestiture. A variety of approaches to encourage or require corporate unbundling, of which the Department's is only one, will remain available. Penalties for competitive abuses, such as Certificate of Public Good ("CPG") revocation or reduction of the competition transition charge (for stranded costs), could also be imposed.

While we would not require divestiture at this time, we recognize that there are benefits to full divestiture and that it can be effected in ways that will redound to the benefit of both shareholders and ratepayers. Utilities may consider voluntary divestiture a suitable alternative to functional separation and other non-structural protections. At the very least, such a course of action would reduce utility uncertainty in the future and enable them to eliminate some portion of regulatory oversight as recommended elsewhere in this report.

3. Safeguards Against Discriminatory Practices

In instances where a firm is either functionally or non-structurally separated, the potential remains for vertical market power abuses to occur. The participants have enumerated a number of safeguards and other protections that should be instituted to discourage or punish such abuses. In this subsection, we describe in general terms the potential problems and their solutions. In a subsequent proceeding, we will address these questions and their resolutions in detail.

Transmission and Distribution Pricing Protections. There is general consensus that, where a company's transmission system will come under the control of the independent system operator, discriminatory pricing or access practices will be prevented. Furthermore, transmission pricing will remain under FERC's jurisdiction, which is committed to policies of

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with respect to divestiture—at this time, at least). In proposing functional separation, we have balanced the sometimes competing objectives of eliminating the potential for market power abuses and enabling the state's utilities to compete as efficiently and fairly as possible. The question of whether any of the costs of separation should be eligible for stranded cost recovery will be taken up in a later proceeding. We recognize that the completion of functional separation by the utilities will require a reasonable transition period in order to avoid unnecessary costs and disruptions. We will address the details of the transition in the Utility Restructuring Proceedings. At this time, we conclude that investor-owned companies that have not functionally separated should not be permitted to sell at retail outside their franchised service areas.

open and non-discriminatory access.[25] As for a firm's distribution system, it should remain under state regulatory authority, which will retain the necessary jurisdiction to prevent and correct potential abuses. It seems reasonable to require that companies file open access tariffs for distribution and related services; we invite parties to comment on this question.

Protections Against Discriminatory Information Flows. Inter-affiliate information transfers take a variety of forms, including the movement of customer information and employees among regulated and competitive entities. Although the specific obligations of distribution companies to provide data to competitive retail providers were not resolved by the CP&LI Subcommittee, it is still possible to identify certain obligations of regulated distribution companies that should be considered in a restructured industry:

- The Disco will be required to provide basic customer information (*e.g.*, service name and address, billing name and address, customer class) to all requesting certified providers or to an information clearinghouse. Any relevant information concerning the transmission and/or distribution of electricity should be made publicly available at the time it is provided to the Retailco.[26] In addition, Discos should make customer class load profile information available to Retailcos in order to reduce the need for expensive metering.[27]
- There should be strict limits on the provision of information by the Disco to Retailcos. An affiliated Retailco should have access to no more information from the Disco than any other competitor has.[28]
- Business operations should be completely separated up to the appropriate management level. This includes separate employees and offices. FERC has developed guidelines that may be useful in this respect.[29]

Deleterious Financial Impacts of Competitive Businesses on Regulated Operations. Financial markets assess risk and demand returns on capital commensurate with those risks. By virtue of its provision of price-regulated services, a utility is generally seen as a relatively lower-risk investment, attended therefore by lower costs of capital than most firms in competitive businesses. It is possible, in the absence of appropriate regulatory oversight, for the activities of competitive affiliates to significantly harm the financial health and risk profile of the regulated entity, thereby raising the total costs of providing the regulated services.

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25. While anti-competitive pricing practices would be illegal under FERC's Open Access Rule, Order 888, it would nonetheless be possible for a firm to engage in other, more subtle discriminatory practices that might escape oversight. Our objective should be to create, to the greatest extent possible, a system that by its very nature, discourages such behavior.

26. GMP, 12/29/95 at 21.

27. DPS, 3/26/96 at 32.

28. GMP, 12/29/95 at 20; CVPS, 6/19/96 at 21.

29. CVPS, 6/19/96 at 19-20.

Protections against such outcomes may be needed. It may be appropriate to set strict capital structure requirements for an integrated company, for example, by limiting affiliates' claims on assets to its own assets only (*i.e.*, do not permit the claims on a defaulting affiliate to transfer to the utility). This should have the effect of more appropriately allocating risks to the firm's various operations. Enabling the regulated distribution affiliate to issue its own debt instruments would also serve this objective.

Discriminatory Use of Shared Resources and Regulated Services. Sharing resources amongst affiliates reduces the costs faced by each entity, but also has the potential to provide an unfair advantage to the firm's competitive operations if the costs of shared resources are disproportionately borne by the customers of the firm's regulated operations. Functional and administrative separation may well provide a partial remedy. With the exception of small and non-profit service providers, there should be no sharing of operational personnel, for the reasons given with respect to information transfers, and reasonable cost allocation rules must be put in place. Board authority to review such rules and other practices may also prove to be a deterrent to abuse, but it would clearly be better to implement effective, workable systems at the start, rather than to depend upon *ex post* investigations. Such systems should also protect against the inappropriate use by the competitive affiliate of services that the company provides its regulated operations (*e.g.*, legal services, marketing, etc.).

Discriminatory Service and Service Quality Protections. Certain categories of distribution company services can be delivered at varying levels of service quality (*e.g.*, response time to service outages, frequency of meter reading, customer service, line extensions, etc.). By varying the services offered and their quality, a Disco may be able to discriminate against the competitors of its generation or retail affiliate. Services and service quality must be comparable for the customers of competing retail providers.

Discriminatory Planning and Resource Deployment. Here again, a transmission or distribution company has the ability to plan its system and deploy resources in ways that could serve the needs of its retail affiliate. The ISO should be empowered to protect against such abuses with respect to transmission investments, and the Board should have like authority at the distribution level.

Discriminatory Marketing by Regulated Entity. The regulated distribution affiliate will receive and handle many customer service requests. The ways in which such customer contacts are handled, particularly in instances where a customer is seeking a new retail provider, can have significant impacts upon the competitive process. It is certainly conceivable that the distribution company will be inclined to direct customers to its own affiliate rather than to other retailers. It will be necessary to devise rules for Disco marketing and customer relations that will protect against unfair practices; and it may also be useful to set up a state-

wide information clearinghouse (maintaining, for example, documents, booklets, and perhaps an electronic bulletin board listing all certified retailers and describing their service offerings) that will give customers easy and relatively free access to relevant market information.[30]

a. Enforcement Authority

CVPS addressed the question of enforcement procedures and penalties in cases where vertical market power abuses are alleged. CVPS suggested several approaches to the question, describing actions that are analogous to FERC's requirements under Order 497 (with respect to gas companies) and to certain provisions of federal environmental law. CVPS envisions continuing Board oversight, with the authority to impose equitable remedies and to issue injunctions to stop abuses and force corrective actions (including the power to require organizational changes).[31] We agree with the Department of Public Service that relevant standards and practice guidelines should be established in advance of a competitive marketplace.

We agree that the Board should retain enforcement authority over the regulated operations of electric companies, including all necessary powers to deter, investigate, identify, and correct the unfair exercise of vertical market power.

B. Distribution Utility Companies and Services

Electric utilities have traditionally engaged in the direct sale of energy (generation services) to end-users. They have also provided transmission services as part of their operations.[32] For reasons discussed earlier, we conclude that the monopoly distribution service of existing electric utilities should, at a minimum, be functionally separate from the competitive aspects of electricity service provision. In order to allow for such a fundamental change in the industry, changes in the terms and conditions of service will be required. These changes are discussed below.

1. The Electric Utility Exclusive Franchise

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30. Citizens Utilities Company ("CUC"), 6/19/96 at 8.
31. CVPS, 6/19/96 at 28, 35.
32. With the establishment of the Vermont Electric Power Company, Inc. ("VELCO"), many aspects of transmission service provision (such as planning and construction) in Vermont have been provided largely independent of the individual electric utility companies. However, some electric utility companies also own and operate high voltage transmission facilities separate from VELCO.

As we have already stated, the changing economics and technology of the electric industry no longer justify the maintenance of exclusive service territory franchises for vertically-integrated generation and distribution companies; however, exclusive franchises for distribution (that is, *delivery*) services alone will remain necessary. Nevertheless, while granting exclusive distribution rights to a single Disco will still be appropriate, it will also be necessary to ensure comparable access to the distribution system for all competitive retail and generation service providers. Vermont will need to establish open access rules and standards to ensure that all competing service providers have access to retail customers and that retail customers have reciprocal access to the market. Discos will need to file tariffs for distribution services that assure non-discriminatory access to all retail and generation service providers. These tariffs should be filed in conjunction with the initial compliance filings in this investigation (*i.e.*, the Utility Restructuring Plans described in Section XIII, p. 144).

2. On-Going Obligations of the Distribution Utilities

Under the current franchise system, electric utilities have provided service under their "obligation to serve." Generation services were provided through investments in physical facilities or through contractual commitments with other facility owners. Under our Plan for Customer Choice, the Disco will retain its obligation to plan, build, and operate its local distribution system in a manner that ensures safe and reliable service to customers. However, we conclude that, as a general matter, Discos should not be permitted to own interests in generation resources.[33] We recognize, however, that some flexibility and consideration should be accorded to public power entities and smaller investor-owned Discos with respect to their on-going ownership interests in generation, provided adequate protections are in place to ensure a fair and competitive market. Disco generation resources should be limited to those necessary to support Disco Basic and Continuing Service Offers as outlined in Section IV, above. The intent of the Basic Service Offer is simply to ensure that all paying customers will always have at least one service option. The Basic Service Offer will also act as a "handling account" for connected customers who, for whatever reason, lose service from their retail provider.

The Disco will also be obligated to provide open access to all competing retail and generation service providers (Retailcos and Gencos) certified in the State to provide retail service. At least during the transition period, the Discos will also retain certain obligations with respect to metering and billing services for retail providers. Disco services, whether

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33. We do not mean, however, to preclude reliance on generation resources used to physically support the distribution services of the Disco (*i.e.*, "distributed utility" investments).

provided to retail customers or to providers, will meet standards of service quality and reliability commensurate with existing standards.[34]

For energy efficiency services, the role of Disco should be focussed on those activities that assure least-cost provision of distribution services, but the local distribution utility may also be able to cost-effectively deliver other energy efficiency services as well. See Section IX, p. 103, for more detail on this point.

3. Regulation of Discos

Today, electric utilities are regulated by the Public Service Board on the basis of their total cost of service. Distribution utility services, including retained (*i.e.*, non-separated) generation resources, will continue to be regulated on the basis of costs. However, greater efficiency may be promoted through alternative forms of price regulation, referred to as Performance-Based Regulation ("PBR"). Briefly, PBR approaches do not set prices strictly on the basis of historic (or accounting) costs, but rather in a way that encourages companies to reduce their costs over time, by providing profit incentives to stimulate innovation, efficiency, and service quality improvements. PBR regulation is already permitted for local service telecommunications providers in Vermont. We conclude that the legislature should permit, but not require, such regulation over Discos.

Related to the regulation of Discos is the regulatory treatment of their affiliated Retailcos and Gencos. Over the long term, we conclude that these companies should not be regulated on the basis of cost or price. Cost-of-service regulation has long been recognized as only a substitute for competitive markets. To the extent that a vibrant competitive market has been established, reasonable prices will be assured through those markets. However, in the absence of true competition, it may very well remain necessary to price-regulate the dominant retail provider in a particular market. This is particularly likely with respect to the affiliated Retailco of a local distribution company.[35]

Furthermore, as already discussed in Section V, the transactions among competitive and regulated affiliates must be monitored closely. Lastly, rules and standards for services provided by Discos to all competing providers will need to be established.

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34. CP&LIS, 3/25/96 at 3.

35. In such circumstances, PBR plans with a sharing formula may be desirable: to the degree that the dominant provider earns authorized profits in excess of a specified threshold, those profits may be used to "write down" any outstanding stranded cost liability.

4. Other Disco Issues

Disconnection should occur only in instances in which a customer fails to pay for service delivered through the Disco. No customer should be disconnected over a payment dispute with a Retailco. The Retailco may drop the customer upon appropriate notification both to the customer and the Disco. Customers dropped from service by a retail service provider are free to seek service from competing service providers or under the Disco Basic Service Offer.

As described in Section IV, bills and other customer information should be readily understandable to consumers. Format standards must be defined. Purchases of competitive services should be identified separately on bills from other wires charges and services provided by the monopoly Disco, and presented according to standard formats that reflect the source of charges to the customers.[36]

We adopt the recommendations of the Consumer Protection and Low Income Subcommittee and the Department's "Consumer Bill of Rights" as it relates to consumer protection matters and Disco obligations. We intend to rely on those recommendations in guiding our actions in future proceedings on these matters.

C. Transmission Services and Companies

In a restructured electric industry, transmission services will continue to be provided most efficiently on an integrated basis, or through close coordination among state and regional owners. However, the present and continuing ownership interests of generators in the transmission system presents a number of complicating competitive concerns. As we discussed in detail above, there exists considerable potential for the owners of transmission resources to use their ownership interests in transmission to leverage competitive gains in the generation market.

In general, we believe it essential that operation of the transmission system, and associated reliability assurances, be managed independent of generation owners (both existing and new market entrants). As described in Section XII, p. 128, the transmission system should be managed by a regional Independent System Operator.

1. Transmission Pricing and Planning

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36. Services or service elements (*e.g.*, metering services) should be functionally unbundled (*i.e.*, separately priced) to the extent that such services are avoidable and determined to be competitively offered by providers other than the Disco.

The Board concludes that, within New England, open access to the transmission grid should be provided through regional tariffs. A regional tariff will reduce the potential for uneconomic distortions created by the "pancaking" of tariffed services across multiple transmission service territories.

We believe that the goals of a transmission tariff should be (1) to secure comparable access to transmission resources by all potentially competitive generation service providers, (2) to send appropriate price signals for owners and operators of transmission resources to build and operate their facilities in an efficient manner, and (3) to send appropriate price signals to the users of the transmission system (consumers and generators) to ensure that their consumption and production decisions are most efficiently made.

Planning and construction of the region's transmission resources are likely to be accomplished either through close coordination amongst owners of transmission or on an integrated regional basis.

2. Transmission System Operation and Reliability

As outlined in Section XII, we believe that an ISO must operate and maintain the regional transmission system. It may be possible to provide many of the ancillary services to assure system reliability through market mechanisms, such as a bidding program through a power exchange. However, overall responsibility for bulk power reliability must be assumed by the ISO, which will act in accordance with non-discriminatory rules for operation and will have appropriate enforcement authority to meet its obligations.

Transmission companies, whether combined with or independent of distribution companies, will continue to be regulated (for transmission, by FERC) as monopoly service providers on the basis of price or cost.

3. Statewide Transmission Company

Vermont has an established, effective, and nationally-unique transmission company in VELCO. VELCO's mission is to design, construct, acquire, contract for, maintain and operate a system of transmission facilities in Vermont as part of an integrated, regional network that serves the needs of the electric distribution companies in Vermont. VELCO is also responsible for statewide transmission planning and for coordinating utility plans with those of the regional network.

VELCO is owned by Vermont's electric utility companies. The majority of VELCO's stock, 57 percent, is owned by CVPS. VELCO is governed by a board of fourteen directors, comprised largely of Vermont electric utility company representatives.

The VELCO system provides Vermonters with the benefits of an efficiently planned and operated transmission system. However, not all of Vermont's high voltage transmission facilities are owned by VELCO.

At least until the roles of the ISO and, possibly, a regional transmission group ("RTG") become well defined, we agree with the Department that VELCO is the appropriate entity to assure transmission open access in Vermont.[37] Nevertheless, VELCO's independent, neutral role could be compromised if the owners of generation assets and services (currently the vertically integrated Vermont electric utilities) remain in substantial control of VELCO. The changes contemplated in this Order (and elsewhere in the region) raise fresh concerns about the ability of VELCO to operate in the future in a manner that is independent of the affiliated generation interests of its owners.

If VELCO's responsibilities continue to include system planning and coordination of the Vermont transmission system, additional protections may be needed to ensure that those functions are delivered in a non-discriminatory manner with respect to all generation owners and operators. VELCO's role in relation to other regional transmission entities, including an ISO and a RTG, is uncertain at this time. Given these uncertainties, it is premature to make any firm recommendations on changes that may be needed for VELCO and its governance, if any. Nevertheless, we will need to be assured that VELCO will be able to continue to provide impartial service in the interest of all market participants—historic utility generators, independent power producers, and wholesale and retail customers.

In our Draft report and Order, the Board requested comments from the participants on three issues relating to restructuring VELCO. From those comments we conclude that these concerns will need to be addressed at a later stage of our investigation. As VELCO notes, "major institutional changes are taking place at both the state and regional levels, and there will be continuing evolution of doctrine at the federal level."[38] VELCO recommends, therefore, that the Board defer consideration of significant change within VELCO until the regional and local outlook is considerably more clear, "at least until federal proceedings regarding prospective changes at NEPOOL are completed or well under way, and until Vermont distribution companies have filed their Utility Restructuring Plans."[39]

We agree with VELCO that its structure and operation have anticipated many changes necessary to support an efficiently competitive market. The ownership and governance of VELCO by a select group of generation owners, however, raise fundamental questions about the extent to which VELCO can behave impartially in developing and administering tariffs,

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37. DPS, 3/26/96 at 22.
38. VELCO, at 1.
39. *Id.*, at 1.

and in the planning and construction of the state's transmission system. Other aspects of VELCO system operation may also raise potential areas of concern. Many of these concerns will potentially be addressed through the establishment of a regional transmission tariff, and through the independent operation of the ISO.[40] Both of these events are still in the development stages.

The Board also solicited comments on the issue of further integrating the State's transmission resources. Citizens Utilities revealed some interest in consolidating the high-voltage transmission facilities in this state.[41] Other comments reveal potential benefits through the complete integration of planning and operation at the transmission and subtransmission levels in the VELCO system.[42]

We agree generally, that it is early to be proposing changes to the VELCO system: its ownership, governance, or by creating specific non-structural safeguards. There may be opportunity for building on past successes of the VELCO system through greater integration of transmission facilities, but that may or may not extend to subtransmission facilities. We invite the Department to work with VELCO and Vermont distribution companies to establish proposals for addressing remaining competitive concerns and to file their recommendations at the same time that the Utility Restructuring Plans are due. At a minimum, we request that the Department identify all areas of potential market abuse that have not been resolved through initiatives to create a regional transmission tariff and an ISO. We also encourage VELCO to work with the Department and distribution utilities to further examine and propose changes and potential further integration of the Vermont transmission and subtransmission system in filing their Utility Restructuring Plans this coming summer.[43] We will address the need for a formal investigation of these issues at that time.

D. Retail Service Companies and Generation Service Providers

Competitive retail service providers (Retailcos) will replace the existing, vertically integrated utilities in providing a variety of generation and other energy services to end-users on a competitive basis. With the limited exceptions described below for dominant providers

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40. We encourage the development of a planning function within a truly independent ISO.

41. Citizens, 11/15/96 at 1.

42. VIPPA, 11/15/96 at 3; CVPS, however, opposes forced pooling of subtransmission facilities because of cost shifting that would occur. CVPS, 11/18/96 at 27.

43. If Board or Board staff involvement would facilitate the process, the Department or VELCO should request such assistance by February 15, 1997.

during the transition, Retailcos and Gencos will not be regulated on the basis of cost or price. These providers will, however, be regulated with respect to generally-applicable performance standards (*e.g.*, renewables and emissions portfolio requirements) and product disclosure and other consumer protections; utility affiliates will also be subject to regulations to protect against competitive abuses.

Retailcos will sell electricity and other energy services to industrial, commercial, and residential customers. Gencos that engage in direct arrangements with retail customers will be treated as Retailcos for purposes of certification and meeting generally-applicable regulations.

1. Certification of Retailcos

The primary instrument for ensuring adherence with rules and regulations over Retailcos will be through certification of providers. Consistent with our experience in telecommunications, we conclude that certain minimal information (*e.g.*, customer complaint numbers on bills, standardized billing information and generation portfolio characteristics) will be essential to effective participation in the market.[44] As discussed in Sections X and XI, we also propose an emissions portfolio, renewables portfolio, and generation disclosure requirements. The specific requirements that will apply to all Retailcos in the certification process will be determined in the Restructuring Implementation Proceedings discussed in Section XIII. The consensus position of the Consumer Protection and Low-Income Subcommittee and the Department's "Consumer Bill of Rights" will provide further guidance to the Board on issues of certification.

Board certification of new entrants will be based upon broadly applied, non-discriminatory criteria that must be met in order to offer service in Vermont. The Board will review applications for certification and grant certification when it finds that the applicant has met criteria concerning consumer protection, financial and managerial resources, the public good, information disclosure, and generation portfolio requirements for renewables and air emissions. The following discussion briefly outlines some features of these criteria.

Board authority to certify entrants into Vermont's retail market should extend to all competitive retail service providers; this is consistent with the Board's historic review and certification authority.[45] A *general good of the state* standard—by which the Board currently

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44. The certification process could utilize a verification application process as proposed by Enron. Enron, 11/18/96 at 14. Further examination of this and other proposals for facilitating review will be examined in the Utility Restructuring Implementation Proceedings.

45. 30 V.S.A. §§ 102 and 231.

conducts its reviews—should extend to all new retail service providers.[46] The detailed standards of service and requirements for meeting this general standard will be established in a future Restructuring Implementation Proceeding. Three specific standards relating to environmental issues are discussed in Sections X and XI.C. They include disclosure requirements for generators, and a renewables portfolio standard and an emissions portfolio standard.

2. Regulation of Competitive Affiliates and Oversight of Retail and Generation Markets

As described in Section V, consumers and competitors must also be protected from the exercise of vertical market abuses arising from control of affiliate transmission and distribution resources. The Board should be given authority to impose scheduled fines for certain consumer and competitive abuses. The Restructuring Implementation Proceedings will define the specific mechanisms for assuring adequate consumer and marketplace protections.

During the early stages of the transition, we propose that the terms and conditions of service (*i.e.*, tariffs and special contracts) provided through the competitive affiliates, be filed with the Board. With respect to the incumbent provider, our purpose is to identify potential vertical and horizontal market power benefits or abuses that could arise by virtue of the on-going affiliate relationship to the Disco or by virtue of the market advantage of incumbency.[47] The Board may also require periodic information filings on services, prices and other aspects of service from all certified providers in lieu of formal tariffs. Such informational filings may be needed to monitor developments in the Vermont market. We also expect to require, or provide for, the posting of standardized pricing information in a common database that permits easy price comparisons by consumers. This centralized "service directory" could enhance competition and lower transactions costs for consumers. Certified providers may be either encouraged or required to participate (by filing and updating service information). While promoting access to information by *consumers*, we intend to minimize unnecessary costs associated with regulatory filings by all service providers. At a later stage of the restructuring implementation proceedings we will also address the extent to which tariff filings should be

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46. See fn. 152, below.

47. At this early stage of the transition, it is premature to reduce regulatory oversight of affiliates of the incumbent distribution companies. We expect Vermont utilities that do not functionally separate will face a significantly greater hurdle when seeking relief from regulatory oversight.

required of competing retail and service companies and the degree to which continuing Board oversight of the market is necessary.[48]

Siting of generation resources will continue to be subject to a review similar to that which exists today under 30 V.S.A. § 248, amended as appropriate to reflect increasing reliance on the market (for instance, determinations of "need" under § 248(b)(2) may no longer be required in a competitive regime, since the risks of an investment being unneeded—*i.e.*, uneconomic—will be borne entirely by the developer, and not by the ratepayers).

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48. At this time, and perhaps over the transition period, we cannot adopt the position advanced by some Vermont utilities (*e.g.*, CVPS, 11/18/96 at 11) that retail affiliates of regulated Discos be subject to no greater regulation than other retail service providers. The potential market advantages, and the potential for market power abuse among providers, are not comparable to other market entrants. Consequently, the nature and character of regulation over affiliates may need to reflect the differential nature of potential market abuses. We agree with CVPS, however, that permitting and licensure requirements should be administered in a non-discriminatory manner. *Id.* at 11.

VI. PROVIDING FOR THE EQUITABLE TREATMENT OF STRANDED COSTS

Stranded costs can be defined as the value of existing regulated utility assets that are in excess of their fair market value.[49] Under the current system, a utility's prices and return on investment are set in accordance with the company's expenses and the depreciated value of the investments it has undertaken to provide service. By contrast, in a competitive environment, a provider's prices and return on investment are determined not directly by its costs, but rather by the price for electricity that buyers are willing to pay in the market. The "stranded cost" problem arises during the transition to competitive power markets because some utilities have made long-term investments in power production facilities or purchase power contracts that have associated costs that will be above competitive market prices. Thus, if the price of electricity in a newly competitive market is below a company's committed costs, some of those investments may become "stranded" or unrecoverable from customers in a competitive market.

In the unregulated business world, when a company invests in plant and equipment that later prove to be uneconomic because of changes in the marketplace, the company bears the risk of its uneconomic investments. If the losses from its uneconomic investments are serious enough, the company goes out of business. As a general matter, society is better off under these circumstances since inefficient producers are eliminated while efficient producers continue to supply the market. The primary goal of moving the electric market from a regulated to a competitive environment is to capture both production efficiencies and long-run dynamic efficiencies that the rigors of the market impose on producers. However, this rapid transition to a market environment heightens the risk to utilities by creating the potential that the investments that they have made in a regulated environment could become uneconomic when customers are given freedom to choose their suppliers. On the other hand, the transition to a market environment may also present substantial *opportunities* for utilities; some of their investments may have a greater market value after the transition to a competitive market. This has been referred to by some as a "restructuring gain."[50]

It is important to consider a number of factors that can affect the potential for any individual utility company to incur stranded costs in the move to a more competitive electric market. In Vermont, recovery of stranded costs will be subject to a multi-factor analysis that includes the weighing and balancing of competing considerations. We believe that the course

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49. The formal definition is set out in Section XI.B.1., page 54, *supra*.

50. Chernick *et al.*, *Estimation of Market Value, Stranded Investments, & Restructuring Gains*", Resource Insights, Inc., 4/17/96 at 31.

we chart here will create the opportunity for full recovery of stranded costs provided they are legitimate, verifiable, otherwise recoverable, prudently incurred, and non-mitigable. However, it is clear that a significant financial restructuring of existing purchase power obligations will be necessary to ensure the financial health of Vermont utilities and fair and reasonable rates to Vermont ratepayers. In making a determination of stranded cost recovery, we will rely on established Board practice and case law. We will discuss the standards that will guide our policies in this area below. Consistent with our precedents, we believe that an opportunity for full recovery must be explicitly tied to successful mitigation. Above market costs that are not reduced through mitigation will be subject to review under the multi-factor analysis discussed in Section VI, p. 76.

A. Magnitude of Stranded Costs

The Stranded Cost Subcommittee developed an initial statewide point-in-time estimate of stranded costs. We caution that this estimate is preliminary only. Much work remains to be done before we will have confidence in utility estimates of their stranded costs. However, the estimate provided to us by the Department gives us an indication of the depth and breadth of stranded cost exposure for the state's utilities. With this caution in mind, we draw some preliminary conclusions for the purpose of this Order.

The effort to derive an estimate of stranded costs was coordinated by the Department after the parties agreed to use the Department's forecast of future electricity market prices under three different scenarios; a high, mid and low market price. The utilities provided their estimates of stranded costs out through the year 2025 to the Department under protective agreement, and the Department aggregated the numbers to obtain the statewide estimates.[51] The statewide analysis of stranded costs resulted in cumulative present value estimates of stranded costs that ranged from a low of $352 million under the assumption of a high market price for electricity, to a high of $1.4 billion under the assumption of a low market price. The categories of estimated statewide stranded costs show that the most significant portion of stranded costs stems from purchase power contracts.[52]

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51. Not all utilities participated in this effort; Rochester Electric Light and Power Company, the Town of Readsboro Electric Department, Washington Electric Cooperative, Inc., and Vermont Electric Cooperative, Inc. did not supply information to the Department.

52. GMP and CVPS have produced estimates of stranded costs that show that almost 60 percent of these costs could result from the current contracts these utilities have with Hydro-Quebec. S. Terry and W. Deehan presentation at AIV annual meeting, 9/26/96.

At the technical conferences, GMP and CVPS agreed to provide the Board with a filing that would present an indication of the rate impacts of full stranded cost recovery. These parties submitted a joint filing on August 5, 1996. The GMP/CVPS analysis used the statewide estimates of stranded costs coordinated by the Department and assumed full recovery of stranded costs. This analysis should not be construed in any way to be definitive or to provide any presumption for stranded cost recovery. As one would expect, the analysis shows that the effect of compressing recovery over a shorter period of time is to increase the rate impact or burden of stranded costs.

We draw two main conclusions from this analysis of stranded costs. The first conclusion is that mitigation efforts are critical to success in reducing electric rates, which is one goal of electric industry restructuring. At the same time, we recognize the need to maintain the financial viability of Vermont's electric utilities. The largest element of stranded costs in Vermont is the category of purchase power contracts. In order to realize both of these goals, it is essential that the utilities focus their efforts on renegotiation of their purchase power contracts. We discuss mitigation efforts below.

The second preliminary conclusion we draw from this analysis is that a five to ten-year transition period for stranded cost recovery appears to provide an appropriate balance of rate stability and reasonable cost recovery. We cannot establish the precise length of the transition at this point in time. We will determine the optimal recovery period in the context of future stranded cost proceedings.

While balancing the competing interests that are affected by our stranded cost recovery policies is a complex task in and of itself, it is further complicated by the uncertainty that surrounds implementation of retail competition. It is not possible to estimate with any certainty the amount of stranded costs that may be at risk because the future market price of electricity cannot be predicted with a significant degree of confidence. In many mature industries that have been stable over the years, future market prices can be estimated within a reasonable range of certainty. However, in the electric industry today we are moving into a future that has little relationship to the fully regulated past. Therefore, any forecast of prices in the new environment will be of uncertain reliability.

We do not intend for this uncertainty to delay the move toward retail competition. As noted earlier, we are taking a set of actions to begin the phase-in of retail access as early as January 1, 1998. With respect to stranded cost recovery, we have set out a judicious, phased approach that we believe will appropriately balance risks and costs between investors and customers and will allow meaningful adjustments over time for all concerned.

B. Definition and Categories of Stranded Costs

1. Definition

We define stranded costs as the value of existing regulated utility assets (including purchase power contracts) in excess of their fair market value, net of the amount by which the fair market value of utility assets exceeds embedded costs. In keeping with the Vermont Principles adopted in our Interim Order, stranded costs eligible for recovery must also be legitimate, verifiable, otherwise recoverable, and prudently incurred.

This stranded cost definition allows us to focus on the distinction between "sunk" or fixed costs and ongoing costs that might be avoided (in whole or in part) by prudent utility action. Sunk costs are those for which capital has already been committed. These include investments that have been capitalized and are included in the rate base of a utility.

Avoidable costs are those costs which may be within the power of the utility to control. They are most often included as operating and maintenance costs in a utility's cost of service. While some forward-going costs of utility operations may be avoidable, and even force hard decisions about whether to continue operating some plants, service quality and reliability must be maintained throughout the transition and beyond.

Avoidable costs may also include future obligations which have not yet been flowed through to rates. In Vermont, this category includes contracts for the future purchase of power, known as purchased power contracts, with qualifying facilities (QFs) and other suppliers. Under these obligations, ongoing payments are contracted to be rendered in the future, for delivery of energy in the future. Where these costs will be above their market value they will need to be mitigated where possible and, to the extent that they represent avoidable future costs, they may be reduced by financial restructuring, contract termination, or other means. While the degree to which any particular commitment is avoidable or can be mitigated has yet to be determined, where such costs are avoidable, real mitigation opportunities must be developed to the maximum extent possible.

2. Categories of Stranded Costs

The largest category of stranded costs includes generation assets, both fully and jointly owned by Vermont utilities, and those generation obligations incorporated in contracts for the purchase of power from a non-owned source, most commonly, purchase power contracts. Examples of this category include Vermont utilities' ownership of Vermont Yankee, the McNeil generating plant, various hydro facilities and contracts such as those with Hydro-Quebec or QFs.

In addition, there are categories of stranded costs that are accounting mechanisms used in the regulatory system. This category is referred to as regulatory assets. These may also be

unrecoverable in a market environment. For now, we accept the following broad categories of regulatory assets related to generation: (1) deferred tax credits; (2) DSM and Account Correcting for Efficiency ("ACE") amounts capitalized and not yet collected; (3) vested post-retirement employee benefits; and (4) nuclear decommissioning costs. There may be other categories of regulatory assets that could qualify for stranded cost treatment. At this time, the categories of stranded costs identified above are preliminary only. We expect that further refinement of the elements included in these categories, and specific details of items to be included, will be explored in the stranded cost estimation proceeding described below. Additionally, specific items to be included in stranded costs will be determined on a case-by-case basis.

While accepting the above categories in broad concept, we are not however stating that all such costs will be eligible for stranded cost recovery. That determination will be made in case-by-case proceedings. However, utilities will have the burden of showing that any claims for stranded cost recovery *outside* of these categories, particularly those that are not generation-related, are justified. Recovery of costs that utilities can reasonably expect to recover through cost-of-service transmission and distribution charges will naturally be excluded from consideration in stranded cost proceedings.

The participants in this Docket have suggested various dates after which, they believe, Vermont's electric utilities were on sufficient notice of the possibility of restructuring that any generation obligation incurred thereafter should not be eligible for stranded cost recovery. Because we believe this is a factual question that may vary by company, this determination will also be made in utility-by-utility proceedings.

We also must reiterate that the definition and categories, outlined above, give us a conceptual basis for the determination of stranded costs; they do not, in and of themselves, imply that all assets so categorized are, by definition, eligible for either full or partial recovery.

C. Standard for Stranded Cost Recovery

1. Legal Precedent

Our analysis of the appropriate level of stranded cost recovery begins with a consideration of whether the State of Vermont is required as a matter of law to allow utilities to recover fully *all* embedded costs that are not profitably recoverable in a market environment. In this Docket, Vermont electric utilities have advanced several legal arguments in favor of full recovery. Their arguments fall into three categories: (1) the utilities have a binding contractual right to full recovery; (2) the Takings Clause of the United States Constitution mandates full recovery; and (3) Board precedent prohibits less than full recovery.

Other participants, including the DPS and VECC, have strongly disagreed and have provided extensive legal briefs to support their positions. For the reasons stated below, we conclude that the utilities are not entitled as a matter of law to require ratepayers to fully pay for the utilities' above-market embedded costs.

a. Contractual Claims

CVPS contends that there is a regulatory compact between the State and its regulated electric utilities, that the compact constitutes a binding contract, and that pursuant to the compact the utilities have a binding contractual right to full recovery of their stranded costs.[53] To support its contention, CVPS relies on the United States Supreme Court's holding in *United States Trust Co. of New York v. New Jersey*, 431 U.S. 1 (1977), in which the Court held that the State of New Jersey violated the Contract Clause when it retroactively repealed an earlier explicit statutory covenant with bondholders that protected revenues pledged as security for Port Authority bonds. In support of its position, CVPS quotes the following passage from *U.S. Trust*:

> In general, a statute is itself treated as a contract when the language and circumstances evince a legislative intent to create private rights of a contractual nature enforceable against the State. In addition, statutes governing the interpretation and enforcement of contracts may be regarded as forming a part of the obligation of contract made under their aegis.[54]

A footnote in the Supreme Court's opinion, immediately following the first quoted sentence, instructs us to compare *Dodge v. Board of Education*, 302 U.S. 74, 78-79 (1937) with *Indiana ex rel. Anderson v. Brand*, 303 U.S. 95, 104-105 (1938). When we examine the *Dodge* and *Brand* cases, they demonstrate the proposition that for a statute to constitute a contract, there must be clear *contractual* language that demonstrates a legislative intent to create a binding contract.[55]

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53. CVPS, 6/19/96 at 40; see also GMP, 8/9/96 at 12 n. 10.

54. CVPS, 6/19/96 at 40, *quoting United States Trust Co. v. New Jersey*, 431 U.S. 1, 17 n.14 (1977).

55. In *Dodge*, the Court upheld an Illinois legislative enactment that reduced the statutory annuities paid to retired teachers; the lowered annuity applied even to teachers who had previously retired under the higher annuity. In *Brand*, the Court considered an Indiana statute concerning teachers' rights to continued employment; the Court held that the statute, in which the term "contract" appeared twenty-five times, was intended to create contractual rights. Even so, the *Brand* Court further concluded that "every contract is made subject to the implied condition that its fulfillment may be frustrated by a proper

Other passages in the *U.S. Trust* opinion reinforce this proposition. In the opinion, the Court cites a number of its prior cases in support of the principle that ". . . a State is without power to enter into binding contracts not to exercise its police power in the future." *U.S. Trust*, 431 U.S. at 23 n.20. The Court further clarified its holding by distinguishing the State's police power and power of eminent domain from the State's taxing and spending power. While the former powers could not be "contracted away," the Court observed that:

> the State could bind itself in the future exercise of the taxing and spending powers. . . . [T]he power to enter into effective financial contracts cannot be questioned.
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> The instant case involves a financial obligation and thus as a threshold matter may not be said automatically to fall within the reserved powers that cannot be contracted away.

Id. at 24-25. Thus, the *U.S. Trust* decision stands only for the proposition that a state can be bound to honor an explicit financial contract, and does *not* forbid a state from changing regulatory rules, even where private financial expectations are diminished.[56]

CVPS also relies on a recent United States Supreme Court case, *United States v. Winstar Corporation*, 64 USLW 4739 (1996), to support its contractual argument.[57] In *Winstar*, the Court held that the government can be bound when it indemnifies its contracting partners, in express and unmistakable terms, from financial losses that arise from regulatory changes. 64 U.S.L.W. 4752-4253. Like *U.S. Trust*, *Winstar* thus holds that the government can be bound by its explicit financial agreements.[58]

We can find no support in the cases cited by CVPS for the proposition that there is a binding "regulatory compact" between the State and its electric utilities. No participant in this Docket has contended that there is regulatory compact that is an explicit, unambiguous agreement like the contracts at issue in *U.S. Trust* and *Winstar*. Even if an *implicit* compact

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exercise of the police power," but in that case found that a later repeal of the statutory contract was not an exercise of the state's police powers. 303 U.S. at 108-109.

56. It is also worth noting that *U.S. Trust* was a plurality decision of three of the seven participating Justices. Three other Justices dissented, finding that the State of New Jersey could not be bound even by its explicit financial covenant.

57. Tr. 7/15/96 Vol. II at 134, 195 (Silver).

58. Also like *U.S. Trust*, the *Winstar* decision was a plurality opinion, adopted by four of the nine Justices (one of whom joined in only part of the opinion), with two separate concurring opinions and one dissenting opinion.

did exist,[59] the cases cited by CVPS do not suggest that the State would be contractually bound never to amend the compact through legislative or regulatory action. There is thus no basis in law to support the existence of a regulatory compact that constitutes a binding and enforceable contract with the State.

Notwithstanding the lack of a contractual claim that is enforceable at law, the utilities' arguments with respect to a regulatory compact or bargain do carry some equitable force, which will be revisited, p. 76, where we discuss an appropriate standard for recovery of stranded costs.

b. Takings Clause

The Fifth Amendment of the United States Constitution prohibits the government from taking private property for public use, without just compensation. In over a century of precedent, the United States Supreme Court has established several principles that guide the determination of claims that utility property has been taken in violation of this Takings Clause.

The first of these guiding constitutional principles is that property devoted to a public purpose is subject to a different takings analysis than private property not so devoted. Starting in 1877 with its decision in *Munn v. Illinois*, 94 U.S. 113, through its decision in *Duquesne Light Co. v. Barasch*, 488 U.S. 299 (1989), the United States Supreme Court has consistently held that property affected with the public interest, such as property used in the provision of public utility service, is not subject to the same constitutional takings analysis as is purely private property.

In *Munn v. Illinois*, the Supreme Court held:

> Looking, then, to the common law, from whence came the right which the Constitution protects, we find that when a business is "affected with a public interest, it ceases to become *juris privati* only." This was said by Lord Chief Justice Hale more than two hundred years ago, in his treatise *De Portibus Maris*, 1 Harg. Law Tracts, 78, and has been accepted without objection as an essential element in the law of property ever since. Property does become clothed with a public interest when used in a manner to make it of public consequence, and affect the community at large. When, therefore, one devotes his property to a use in which the public has an interest, he, in effect, grants to the public an interest in that use, and must submit to be controlled by the public for the common good, to the extent of the interest he has thus created. He may withdraw his grant by discontinuing the use; but, so long as he maintains the use, he must submit to the control.

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59. Indeed, it is not clear that there has been an implicit "regulatory compact." Tr. 7/16/96 at 72 (Bradford); DPS, 7/15/96.

94 U.S. at 125-126.

The Court reaffirmed this principle in *Duquesne*, stating: "This partly public, partly private status of utility property creates its own set of questions under the Takings Clause of the Fifth Amendment." 488 U.S. at 307.

The Supreme Court's decisions on the limits that the Takings Clause imposes on utility regulation reveal several clear principles upon which the Court's decisions are consistently anchored. The overarching principle is that under the Takings Clause, it is the end result of regulation that matters rather than the specific methodology by which the result is obtained; the end result must represent a balancing of ratepayer and shareholder interests, and fall within a range of reasonableness. Subsumed under this overarching principle are several subsidiary principles: the Constitution does not require full recovery of prudently incurred utility costs; the Constitution does not require states to protect utilities from the effects of competition; and the Constitution does not require rates that guarantee the financial viability of the utility. These principles, and the Supreme Court cases in which they have been espoused, are discussed below.

The end result test was only adopted by the Supreme Court after it had tried, and ultimately rejected, a "fair value" test. In those early cases, the Court interpreted the Takings Clause to require that utility investors receive the "fair value" of their property, with "fair value" held to constitute the contemporary market value. *E.g.*, *Smyth v. Ames*, 169 U.S. 466 (1898); see, generally, *Jersey Central Power & Light Co. v. FERC*, 810 F.2d 1168, 1175 (D.C. Cir. 1987). In the 1940s, the Court abandoned the close judicial scrutiny of the "fair value" test, substituting the deferential "end result" test which prevails to this day. See, generally, *Jersey Central*, 810 F.2d at 1175.

The first case that clearly articulated the end result test was *FPC v. Hope Natural Gas Co.*, 320 U.S. 591 (1944):[60]

> [I]t is the end result reached not the method employed which is controlling. It is not theory but the impact of the rate order which counts. If the total effect of the rate order cannot be said to be unjust and unreasonable, judicial inquiry under the Act is at an end. The fact that the method employed to reach that result may contain infirmities is not then important.

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60. *Hope* actually interprets the statutory "just and reasonable" directive of the Federal Power Act, which the Court had determined to coincide with the Constitutional requirements of the Takings Clause. *FPC v. Natural Gas Pipeline Co.*, 315 U.S. 575, 586 (1942).

320 U.S. at 602 (citations omitted). This determination of whether the end result is reasonable requires "a balancing of the investor and consumer interests." *Id*. at 603. The Court further explained that regulation need not ensure that the regulated utility makes a profit. *Id*.

Since *Hope*, the Supreme Court has consistently confirmed the vitality of the "end result" test and its requirement that both ratepayer and investor interests be considered. For example, in *Permian Basin Area Rate Cases*, 390 U.S. 747 (1968), the Court reaffirmed that "investors' interests provide only one of the variables in the constitutional calculus of reasonableness." 390 U.S. at 769. In that case the Court further explained that:

> The Commission cannot confine its inquiries either to the computation of costs of service or to conjectures about the prospective responses of the capital market; it is instead obliged at each step of its regulatory process to assess the requirements of the broad public interests entrusted to its protection by Congress. Accordingly, the "end result" of the Commission's orders must be measured as much by the success with which they protect those interests as by the effectiveness with which they "maintain credit and attract capital."

Id. at 791.

In its most recent case applying the Takings Clause to utility ratemaking, the Supreme Court strongly reaffirmed *Hope* and its progeny:

> [A]n otherwise reasonable rate is not subject to constitutional attack by questioning the theoretical consistency of the method that produced it. "It is not theory, but the impact of the rate order which counts." *Hope*, 320 U.S., at 602. The economic judgments required in rate proceedings are often hopelessly complex and do not admit of a single correct result. The Constitution is not designed to arbitrate these economic niceties.

Duquesne, 488 U.S. 299, 314 (1989).

The *Duquesne* case involved a utility's challenge to a newly-enacted Pennsylvania statute that precluded the inclusion in rate base of any utility plant that was not in use and useful. While the Court cautioned that "a State's decision to arbitrarily switch back and forth between methodologies in a way which required investors to bear the risk of bad investments at some times while denying them the benefit of good investments at others would raise serious constitutional questions," it held that the change in ratemaking methodology effected by the Pennsylvania statute did not violate the Takings Clause. It so held because Pennsylvania's ratemaking methodology had at all relevant times been predominantly based on historical cost, and because the challenging utility had failed to demonstrate that the resultant rate fell outside the constitutionally permissible zone of reasonableness. *Id*. at 315.

The Court emphasized that the Constitution does not bind the States to follow a single ratemaking methodology:

> The adoption of a single theory of valuation as a constitutional requirement would be inconsistent with the view of the Constitution

> this Court has taken since *Hope Natural Gas, supra*. As demonstrated in *Wisconsin v. FPC*, circumstances may favor the use of one ratemaking procedure over another. The designation of a single theory of ratemaking as a constitutional requirement would unnecessarily foreclose alternatives which could benefit both consumers and investors. The Constitution within broad limits leaves the States free to decide what ratesetting methodology best meets their needs in balancing the interests of the utility and the public.

Id. at 316 (footnote omitted). In a footnote accompanying this quoted passage, the Court further explained its holding, and in so doing has provided us with clear guidance for resolving the constitutional questions posed by stranded cost recovery should Vermont move toward a more competitive electric industry:

> [R]igid requirement of the prudent investment rule would foreclose . . . a return to some form of the fair value rule just as its practical problems may be diminishing. *The emergent market for wholesale electric energy could provide a readily available objective basis for determining the value of utility assets*.

Id. at 316 n. 10 (emphasis added). The Supreme Court here acknowledges that a return to market-based valuation may make practical sense in light of the developing competitive market, and indicates that such market-based rates would not violate the Takings Clause.

Other Supreme Court cases provide additional confirmation that the Constitution does not require the State of Vermont to allow full recovery of stranded costs. Close on the heels of the 1944 *Hope* decision, the Court heard a streetcar company's challenge to a state commission order that reduced the company's base fare from seven to six cents. *Market Street Railway v. Railroad Commission of California*, 324 U.S. 548 (1945). The streetcar company was losing ridership in the face of increasing competition, and contended that the mandated rate reduction would compel it to operate at a loss. Consequently, the company alleged, the fare reduction violated the Takings Clause. The Supreme Court rejected this claim, stating:

> The appellant in support of its contentions that it has been denied due process in procedure and has been subjected to an unconstitutional taking of its property invokes many decisions of this Court in which statements have been made that seem to support its contentions. But it should be noted at the outset that most of our cases deal with utilities which had earning opportunities, and public regulation curtailed earnings otherwise possible. But if there were no public regulation at all, this appellant would be a particularly ailing unit of a generally sick industry. The problem of reconciling the patrons' needs and the investor's rights in an enterprise that has passed its zenith of opportunity and usefulness, whose investment already is impaired by economic forces, and whose earning possibilities are already invaded by competition from other forms of transportation, is quite a different problem. The Company's practical situation throws important light both on the question whether the rate reduction has taken its property and also upon the criticisms it makes of the conduct of the hearings.

324 U.S. at 554.

The Court continued its constitutional analysis by noting that it would be inapposite to apply holdings of cases in which *regulators* had limited the profits from monopoly assets under regulation to a case in which the value of utility investment had been eroded by *market* forces. *Id*. at 566-567. "The due process clause has been applied to prevent governmental destruction of existing economic values. It has not and cannot be applied to insure values or to restore values that have been lost by the operation of economic forces." *Id*. at 567. Consequently, the Court concluded that no taking had occurred. *Id*. at 568.

Even earlier, before abandoning the *Smyth v. Ames* "fair value" test, the Court had explicitly recognized that the Constitution does not require regulators to protect utilities from the effects of competition. In *Public Service Commission of Montana v. Great Northern Utilities Co.*, 289 U.S. 130 (1933), the Court held:

> The due process clause of the Fourteenth Amendment safeguards against the taking of private property, or the compelling of its use, for the service of the public without just compensation. . . . But it does not assure to public utilities the right under all circumstances to have a return upon the value of the property so used. The use of, or the failure to obtain, patronage, due to competition, does not justify the imposition of charges that are exorbitant and unjust to the public. The clause of the Constitution here invoked does not protect public utilities against such business hazards.

289 U.S. at 135.[61]

Thus, for more than fifty years, the United States Supreme Court has demonstrated a firm resolve to recognize the interests of both ratepayers and investors when it performs a public utility takings analysis. We cannot promote one set of interests to the exclusion of the other. In order to ensure that we have balanced these interests, we must define them.

The ratepayer interest is to pay only such rates as are just and reasonable. The principal purpose of utility rate regulation has long been recognized to be the protection of ratepayers from excessive monopoly rents, by attempting to mimic the results of a competitive market. Given the technological and market developments noted earlier in this Report, we now have the promise of a truly competitive generation market, which justifies the restructuring of our electric industry away from comprehensive cost-of-service regulation. Consequently, the reasonable rates that regulation seeks to provide can best be measured by a truly competitive market. Thus, the ratepayers' interest in reasonable rates, which is part of the constitutional balancing in a takings analysis, can best be understood as an interest in

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61. The Vermont Supreme Court has similarly held that "[e]conomic risks are part of the utility business, and even the risk of economic catastrophe may properly be assigned to owners of the utility rather than to its consumers." *In re Central Vermont Public Service Corp.*, 144 Vt. 46, 58 (1984).

competitive market rates. This interest is compromised to the extent that ratepayers are required to pay above-market rates in order for utilities to recover their stranded costs.

The utility interest that we are bound to consider is the opportunity to earn a reasonable return on its investment. It is plain from the *Market Street Railway* and *Great Northern Utilities* decisions that we need not, as a matter of constitutional law, ensure the utility's ability to earn a return in the face of a competitive market. Opening Vermont's electric utility industry to retail competition will continue to provide the utility with the opportunity to earn a return, with the possibility of greater returns than under a continuation of the regulated monopoly system.

Some participants have contended that without full stranded cost recovery, mandating access to transmission and distribution facilities would constitute a physical occupation of the utilities' property in violation of the Takings Clause under *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419 (1982).[62] We disagree, for several reasons. First, as noted above, property devoted to the provision of public utility service is not subject to the same takings analyses as private property. Vermont's electric utilities have benefited from the state-granted authority to place facilities within public highway rights-of-way and the state-granted authority to exercise the power of eminent domain. 30 V.S.A. §§ 110, 2502. Utility transmission and distribution facilities constructed in large measure on public rights-of-way pursuant to public authority cannot now reasonably be argued to be purely private property not subject to rate and access regulation as common carriers. We must point out that open access to network facilities on a common carrier basis has been a hallmark of regulatory reform in the telecommunications, natural gas, and electric industries.

Second, transmission and distribution facilities will continue to be subject to rate regulation as common carriers, and their owners will be compensated for providing transmission and distribution services through rates which are just and reasonable, including a fair rate of return on the T&D facilities themselves.

Third, we note that none of the cases cited in support of the physical takings claim addresses the issue presented here: whether it is an unconstitutional taking to require a public utility to provide access to its lines to competitive suppliers. In fact, courts that have addressed this issue have repeatedly found no taking in these circumstances. *Energy Association of New York State v. Public Service Commission*, No. 5830-96 (N.Y. Sup. Ct. Nov. 25, 1996) (requiring retail electric wheeling is not a permanent, physical occupation of

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62. GMP, 7/10/96 at 30-32; GMP, 8/9/96 at 12-15; GMP, 11/15/96 at 15-16. CVPS similarly contends that mandatory access to its wires would constitute a physical invasion of its property. CVPS, 6/19/96 at 69.

utilities' facilities and thus does not constitute a taking under *Loretto* and Takings Clause does not mandate full recovery of stranded costs); *Rochester Gas and Electric Corp. v. Public Service Commission*, 71 N.Y.2d 313, 520 N.E.2d 528 (1988) (requiring gas utility to transport natural gas from competitive suppliers to the utilities' customers does not effect an unconstitutional physical invasion of the utility's pipelines); see also *Kansas City Power & Light Co. v. State Corporation Commission*, 238 Kan. 842, 715 P.2d 19 (1986), *appeal dismissed*, 479 U.S. 801 (1986) (mandating electric utilities to physically interconnect with PURPA qualifying facilities is not an unconstitutional taking); *The Pipeline Cases*, 234 U.S. 548, 561 (1914) (not a taking when a "statute practically means no more than [owners of oil pipelines] must give up requiring a sale to themselves before carrying the oil that they now receive"). Consistent with these court holdings, we conclude that requiring retail wheeling in Vermont would not constitute a permanent, physical occupation of the incumbent utilities' wires, and thus would not constitute a taking under *Loretto*.[63]

Because the Constitution requires us to recognize the ratepayers' interest in reasonable rates, because a competitive market would continue to offer Vermont's electric utilities an opportunity to earn a return, because the Constitution does not protect utilities from the forces of market competition, and because requiring utilities to provide access to their wires at just and reasonable transportation rates does not effect an unconstitutional physical invasion of the utilities' property, we conclude that the Takings Clause does not mandate any particular level of recovery of stranded costs.

c. Board Precedent

In our Interim Order of May 24, 1996, we adopted the Vermont Principles for Competition in the Electric Industry.[64] Included among those principles is the following:

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63. In *Loretto*, the Supreme Court itself suggested that no physical taking would be effected if the statute had required landlords to provide cable installation at the request of a tenant, because then the landlord would own the installation. 323 U.S. at 440 n. 19. The Court noted that "[t]he fact of ownership is, contrary to the dissent, not simply 'incidental'. . . ; it would give a landlord (rather than a CATV company) full authority over the installation except only as government specifically limited that authority." *Id.* This scenario, with the landlord being required to provide a wire over which the cable television company would have access to transmit its signals to customers, is perhaps more analogous to the issue before us.

64. Order of 5/24/96 at 4.

> Existing commitments of utilities arising from past decisions made pursuant to historic regulatory and legal principles must be honored. Utilities are entitled to recover legitimate, verifiable, and otherwise recoverable and prudently incurred costs pursuant to those principles. Utilities have an obligation to take all reasonable measures to mitigate the costs of their existing commitments.[65]

The previous section of this Report has reviewed the constitutional principles that govern Vermont's determination of stranded cost recovery. We now turn to the historic regulatory standards which, pursuant to the Vermont Principles, we shall also follow.

First, our precedent is absolutely clear, and it is uncontroverted by any participant in this Docket, that imprudent expenditures by utilities are not recoverable from ratepayers. *E.g.*, Dockets 5630 *et al.* (*In re Vermont Electric Cooperative*), Order of 12/30/93 at 52.

Next, we have on several occasions ruled on the recovery in rates of utility assets that were prudently incurred but were not used and useful. In Dockets 5630 *et al.*, we summarized the consistent and long-standing precedents that supported the used-and-useful standard. We observed that it was in 1897, in *Smyth v. Ames*, that the Supreme Court first announced "the fundamental rule that captive customers should not pay the cost of property that is not being used to provide them with service." Dockets 5630 *et al.*, Order of 12/30/93 at 50. We then noted that the used-and-useful standard had been widely and consistently employed by both federal and state utility regulators; relying on a 1985 law review article on the subject, we stated: "After reviewing twenty-five cases where similar disallowances were made, [the law review article] concluded that the consistent goal was to ensure that ratepayers paid only an equitable share of the costs of abandoned *or excessively costly* power plants." *Id.* at 51 (emphasis added). In Dockets 5630 *et al.,* we then indicated that "[r]ate-making decisions in Vermont have been consistent with those federal and other state determinations," and we referred to our previous decision in Docket 5132 (*In re CVPS Seabrook Issues*). *Id.*

In Docket 5132, we reviewed our previous treatment of five major uneconomic investments, and found that we required sharing of the uneconomic costs in four cases and did not address the sharing issue in the fifth case. Docket 5132, Order of 5/15/87 at 137-144. In Docket 5132 itself, we concluded that CVPS's prudent but uneconomic investment in Seabrook Unit I must be shared between the utility and its ratepayers. *Id.* at 134, 166.

Subsequent Board decisions have similarly and consistently held that the costs of investments that are not used and useful are to be shared between the utility and ratepayers. Dockets 5630 *et al.*, Order of 12/30/93 at 57-59; Dockets 5810 *et al.* (*In re Vermont Electric Cooperative*), Order of 2/8/96 at 34-39. In our decisions regarding cost sharing of

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65. *Id.* at Attachment A, p. 2.

uneconomic investments, we have required that the utility and the ratepayers each bear approximately 50 percent of the uneconomic cost.

There appears to be no dispute among the participants in this Docket that our prior decisions call for sharing between utilities and ratepayers of prudent yet uneconomic investments that do not provide service to ratepayers (such as a canceled power plant). The participants strongly disagree, however, over whether our precedents also support sharing of prudent yet uneconomic costs of investments that are in service (such as a power plant that produces electricity at above-market costs). The dispute focuses on whether our decision in Dockets 5701/5724 (*In re CVPS*) prohibits the application of the used-and-useful sharing standard to above-market investments that are providing service to ratepayers.

This dispute can be readily resolved. In Dockets 5701/5724, the Department proposed the adoption of a particular economic, or market, test of used-and-usefulness. We rejected the Department's proposal because we found "that *under current conditions*, [the Department's] proposed adjustment is flawed." Dockets 5701/5724, Order of 10/31/91 at 122 (emphasis added). Specifically, we criticized the aspect of the proposed test that would allow it to "be applied *at any time* during the life of a prudently-acquired asset to determine its used-and-usefulness." *Id*. at 125 (emphasis in original). We further criticized the proposal for its asymmetrical assignment of risks to shareholders, since it did not offer shareholders the opportunity to reap the rewards if the utility keeps its costs below market costs. *Id*. at 126. We then expressly noted that, consistent with the Supreme Court decision in *Duquesne*, "our ruling in the present matter should not be construed as a finding that a market-value test is fundamentally unacceptable. . . . As utility markets become more open and competitive, it may become increasingly possible and, in many cases, desirable to employ market-based tests to govern the utility's total return." *Id*. at 126-127. Thus, our decision in Dockets 5701/5724 expressly allows for use of a market-based test of used-and-usefulness as competitive electric markets develop.

Consistent with this understanding of our Order in Dockets 5701/5724, other of our prior decisions have unambiguously (1) announced that uneconomic costs must be shared regardless of whether the utility sells or retains the uneconomic investment (Docket 5132), and (2) applied the used-and-useful standard to above-market costs of a completed, in-service project (Dockets 5630 *et al.*). In Docket 5132, we cited with approval a Massachusetts DPU order that:

> measured "usefulness" by the economic value of the project, based on the value of its power. In this case we do not need to calculate the market value of potential power from Seabrook Unit I; that value, discounted by attendant risks, is represented by the purchase price paid by EUA.

Docket 5132, Order of 5/15/87 at 129 n. 40. Later in that same Order, we emphasized that we would have treated CVPS's uneconomic investment in Seabrook Unit I the same way—with a sharing between the utility and its ratepayers—regardless of whether CVPS had sold the investment. *Id*. at 147-151. Thus, had CVPS retained its share of Seabrook Unit I, we would have required the same equal sharing of the uneconomic, prudently-incurred costs.

In Dockets 5630 *et al.*, in the context of reviewing a proposed VEC debt restructuring agreement, we determined that the difference between the market value and the total investment in VEC's North Hartland project "represents that portion of the investment which is not used and useful." Dockets 5630 *et al.*, Order of 12/30/93 at 58.[66] Our Order required that any future VEC debt restructuring proposal comport with several criteria, including that it "can be financed by rates that, consistent with traditional rate-making principles, do not require ratepayers to pay full costs for power plants that were abandoned, imprudently constructed, *or so expensive as to be neither used nor useful*." *Id*. at 83 (emphasis added).

Our precedents have been wholly consistent with those of the United States Supreme Court under the Takings Clause. Our Order in Dockets 5630 *et al*. reflects this convergence between our rulings and Supreme Court constitutional precedent, and demonstrates that the convergent holdings require neither full stranded cost recovery nor even rates that guarantee the financial survival of a particular electric utility:

> [T]he New Hampshire Supreme Court considered a VEC-like claim that "financial necessity" entitled a utility to include the uneconomic costs of the Seabrook project in its rates. The Court was not persuaded:
>
> > PSNH is wrong in contending that *Hope* and its progeny guarantee a utility rate which assures financial integrity.
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> *In Re PSNH*, 539 A2d 263, 270 (1988). In its analysis, the New Hampshire Court found *Market Street Railway* to be as compelling as we do here:
>
> > The Supreme Court has expressly held that it is not the mandate of the constitution to rejuvenate the value of the investments of a company whose "zenith of opportunity" has been eclipsed by the operation of economic forces.
>
> *Id*. citing 324 US at 554.
>
> We have also considered the Cooperatives' reliance on *Jersey Central Power and Light v. FERC*, 810 F2d 1168 (1987). Review of that decision shows that the Court of Appeals also relied upon *Market Street Railway* and carefully noted that a utility's right to revenues was limited by the ratepayers' right not to be charged for improper costs.

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66. VEC had planned to sell *one-half* of its interest in the North Hartland project. The Board doubled the projected sale price to estimate the market value of the *entire* project, including the one-half interest that VEC was retaining. *Id*. at 32, 58.

> "[A] company which is unable to survive without exploitative rates has no entitlement to such rates." *Jersey Central* at 1181.
>
> For all these reasons, we come to the same conclusion as did New Hampshire's Supreme Court:
>
> > *Jersey Central* does not stand for the proposition, nor does PSNH argue, that a publicly regulated utility has a constitutional right not to go bankrupt. *Id*.

Dockets 5630 *et al.*, Order of 12/30/93 at 56.

We conclude that the historic regulatory and legal principles governing the recovery of uneconomic costs indicate that Vermont's electric utilities do not have a legal entitlement to require ratepayers to pay in full all of their prudently incurred, but above-market stranded costs.

2. Balancing of Interests

We must now determine how stranded costs should be allocated between the utility and its ratepayers. We first acknowledge the equitable validity of the utilities' claim for recovery of a substantial proportion of their stranded costs. Vermont's electric utilities have historically held the obligation to provide adequate, reliable service to all customers who request it. At the same time, the utilities benefited from a state-granted near-monopoly[67] and from the opportunity to earn a reasonable return on their investments. In order to satisfy their obligation to provide service to their customers, Vermont's utilities constructed power plants and entered into purchase power contracts which presently appear uneconomic. Because these uneconomic costs were incurred for the benefit of their customers, the utilities contend that the customers should bear the stranded cost burden.

While this argument may appear compelling from the viewpoint of the utilities, we must also consider the interests of ratepayers. Unlike the utilities, the ratepayers had little say in how the utilities invested, contracted, or expended their money. Thus, while it is true that the uneconomic investments of the utilities were made in order to provide service to ratepayers, those investment decisions were controlled by the utilities, not the ratepayers. In particular, regarding the largest stranded cost category, the Hydro-Quebec contract, we note that the utilities' decision to "lock in" the contract on August 28, 1991 was made by the utilities themselves under rapidly eroding market circumstances.[68] The utilities incurred many of their

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67. Even with exclusive franchise territories, Vermont utilities were subject to some competitive pressures from DPS power sales, possible municipalization, other fuels, and customer self-generation.

68. Dockets 5701/5724 (*In re CVPS*), Order of 10/31/94 at 102-121.

potentially stranded expenses in order to earn profits for their investors, and have over the course of many years recovered substantial profits in rates.

Ratepayers are entitled to reasonable rates. The historic goal of regulation has been to serve as a proxy for a competitive market, so that customers would pay close-to-market rates rather than the monopolistic rents that would have obtained in the absence of regulation. It would be unreasonable, and inconsistent with the long history of utility rate regulation, to require customers to pay rates that may be commercially unsustainable.

Vermont is currently experiencing an upward rate trajectory that results largely from the escalating terms of purchase power contracts, while the increasingly competitive electricity market is headed in the opposite direction.[69] While the market will ultimately establish prices for electricity, during the transition, the stranded cost component of price is artificially set outside of the market. If the stranded cost charge set for Vermont utilities is significantly above those set in competing states, Vermont utilities and their customers would be at a cost disadvantage. Our analysis of the preliminary estimates of stranded costs *strongly* suggests that, in the absence of substantial mitigation, particularly of the above-market purchase power contracts, full stranded cost recovery for Vermont utilities may not be commercially sustainable in light of expected market trends in competitive energy markets. Moreover, unsustainable contract prices for one utility could have a reverberating effect on the security of other utilities in the state where they are jointly and severally liable for above-market power purchases. In these circumstances, we do not see how it could be possible to impose a total pass-through to ratepayers of Vermont utilities' substantial above-market costs over a period of many years. Given these constraints, a financial restructuring of those obligations may well be necessary.

While the financial challenge is imposing, it is not insurmountable. We are confident that many options for significant financial restructuring are available to Vermont utilities, their

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69. For example, the restructuring settlement with New England Electric System in Massachusetts plans to provide a minimum rate reduction of 10 percent starting January 1, 1998. Restructuring Settlement Agreement among New England Electric System, the Massachusetts Attorney General, *et al.* in Mass. D.P.U. Docket Nos. 96-100 and 96-25. The New Hampshire legislature has called for a restructuring solution that will provide rate relief to consumers by reducing electricity rates in that state so that they "approach competitive regional electric rates." N.H. Rev. Stat. Ann. §§ 374-F:3, XI, 374-F:4, VI(a). Rate freezes or reductions are also in place or expected in Rhode Island, Maine, and New York (see Fitch Investors Service, Special Report, 7/29/96).

customers, and their suppliers.[70] We will support solutions that are fair to ratepayers and investors, and that are sustainable as a matter of commercial reality; but we cannot support solutions that require future ratepayers to pay large surcharges over a long period of time for utilities' past decisions, and which impose an outsized burden on the Vermont economy in relation to this state's economic competitors.[71]

Our recognition that recovery of stranded costs is a critical financial component for utilities, and that the State has an important interest in maintaining the financial health of its utilities, does not mean that the benefits to ratepayers from restructuring should be foregone in order to keep utilities financially whole. A restructured electric industry holds the bright promise of quickly bringing substantially lower rates to all Vermont consumers. That promise would be greatly diminished if consumers were required to bear an inordinate amount of the utilities' stranded costs. Thus, while it is not in the best interest of the State if its current electric utilities suffer financial ruin, neither is it in the best interest of the State if its citizens and businesses are saddled with electricity charges that significantly exceed market costs or that exceed costs that prevail in competing states, thereby creating a long-term competitive economic disadvantage to Vermont.

Our challenge is to protect the financial viability of Vermont's electric utilities without denying Vermont's ratepayers the lower market prices that customer choice would offer. We conclude that this balance can be struck if all available opportunities to mitigate stranded costs are fully realized. These opportunities are discussed in the following section.

3. The Obligation to Mitigate

We strongly believe that, as Vermont moves toward a restructured electric industry, all reasonable measures that are consistent with the goals of restructuring should be implemented to foster the economic well-being of the State's electric utilities and their customers. The most significant of these measures must be taken by the utilities themselves: the mitigation of

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70. See, for example, the mitigation possibilities listed below in the following section.

71. We have previously rejected a proposed VEC debt restructuring agreement, in part for its failure to keep rates at commercially sustainable levels. Dockets 5630 *et al.*, Order of 12/30/93 at 38, 43, 77.

stranded costs. Opportunities to cut costs and strengthen the long-term competitive position of Vermont's utilities exist and must be captured.[72]

Mitigation is in the best interests of all concerned: it will improve the competitive position of the state's utilities; it will ensure a more efficient market; and it will bring the benefit of competitive electric rates to the state's consumers. The preliminary estimates of stranded costs for Vermont utilities show that these costs must be brought down if ratepayers are to see the benefit from lower electric prices in the short term.

Mitigation is of such importance that we will not set a final determination for stranded cost recovery until we have evaluated the efforts of the utilities in this regard. Mitigation efforts and their success must be a critical component of our review when we make a final determination of the amount of stranded costs to be recovered from the state's ratepayers.

As the work of the Stranded Cost Subcommittee revealed,[73] and as utilities throughout the nation are discovering, there may be numerous opportunities to mitigate potentially stranded costs. Identifying the potential for, and the capture of, mitigation opportunities will be a challenge. Ultimately, reasonable judgments will have to be made. However, at this point we can identify the following as potential mitigation strategies:

(1) the renegotiation and restructuring of existing purchase power contracts;[74]
(2) the buyout (or buydown) of existing power purchase contracts or unit entitlements;
(3) the economic operation of existing facilities/contracts;
(4) the shut-down or moth-balling of non-economic utility-owned generating units;
(5) the renegotiation and restructuring of fuel supply contracts;
(6) the implementation of cost control and cost reduction procedures;

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72. Some utilities have voluntarily taken write-offs or have chosen to write-down some of their uneconomic assets so as to be in a stronger financial position to compete in the restructured market. Utilities across the country are also reducing costs, particularly overhead costs, through efficient reorganizations. Some of these actions may not be power cost deemed mitigations *per se*, but they may have tax, tax-timing, and other advantages that make them attractive in the reduction of costs and improvement in a utility's competitive position. Thus, they are actions that Vermont utilities should consider in light of their long-term competitive interests.

73. See Stranded Cost Subcommittee report at 12.

74. The Board reserves the right to limit participation in various restructuring opportunities (low interest restructuring bonds, participation in an emissions portfolio, or other features of the Board's proposal).

(7) the sale/divestiture of uneconomic assets;
(8) the write-off or write-down of uneconomic assets;[75]
(9) appropriate load growth;
(10) the exchange of under-utilized assets; and
(11) refinancing existing obligations through low-cost, long-term bonds.

Foremost among mitigation obligations is the requirement to renegotiate and restructure above-market purchase power contracts. Uneconomic purchase power contracts appear to comprise by far the largest component of Vermont utilities' potential stranded costs. We fully expect Vermont utilities to seek to renegotiate those contracts to bring their costs closer to market costs. The Vermont utilities and their power suppliers must recognize that if they fail to substantially reduce uneconomic purchase power obligations, the utilities' shares of stranded costs could well represent an overwhelming financial burden.

a. Limitations on Mitigation

Two of the mitigation strategies identified by the Stranded Cost Subcommittee raise particular concerns limiting their applicability, and require discussion here. The first is load growth. In the present regulated environment, we believe that appropriate load growth mechanisms are already in place. A number of our state's utilities have economic development programs that we have reviewed and approved. While we have consistently supported discounts that stimulate economic development, those contracts must meet certain criteria. The new load must be efficient, and must not shift costs onto other ratepayers. As restructuring moves forward, other load growth mechanisms may be available to utilities under conditions set out in a PBR plan. However, such strategies must be designed within the parameters of three key principles: absence of cost-shifting, protection of the environment, and cost-effectiveness on a total cost basis. After the transition to full retail choice, Vermont utilities will be able to compete on an equal basis with other providers for customer load.

The second potential mitigation strategy that may need to be limited is the exchange or trade of under-utilized utility assets for value. Exchanges or trades of assets that continue to be subject to regulation because they are monopoly services, *i.e.*, transmission and distribution assets, should not be monetized internally and traded or exchanged as if they were competitive market-based assets without prior review by this Board.

We must also discount any mitigation that results from the exercise of horizontal market power. And as noted previously, we will reject mitigation efforts that merely result in cost-shifting between customer classes, or between different classes of utility services. We will also take into account the tax implications of the mitigation strategies discussed above when

75. See fn. 76.

assessing the dollar impact that a strategy has on investors and ratepayers. We expect to consider only the net after-tax effects of mitigation in applying the standard for stranded cost determination.[76]

b. Mitigation and Performance-Based Regulation

We expect mitigation to be consistent with current cost of service regulation as well as with innovative PBR schemes that may be approved during the transition. To encourage aggressive mitigation of stranded costs in the context of a PBR scheme, we will support a sharing mechanism that allocates to shareholders some portion of the mitigation savings, as an incentive for successful utility cost-cutting measures. A transitional PBR scheme could incorporate an appropriate sharing of risks and rewards in a manner that properly places incentives to lower risks on those who are able to manage those risks. When authorized, we will invite Vermont utilities to submit PBR proposals that may provide an equitable and efficient resolution of these mitigation issues during a transition period. See Section XIII, p. 145, below.

4. Specification of Standard

In light of the legal precedent, balancing of interests, and necessity of mitigation that we have described above, we will now frame the considerations that should govern the proportion of stranded costs that utilities will be allowed to recover from ratepayers. These considerations are designed to result in an equitable sharing of benefits, risks and costs in the transition to a more competitive electric industry.

Some of the participants in this proceeding have urged us to apply past rulings on the recovery of prudent but excessive utility costs, and conclude that they should be split evenly between ratepayers and utilities. While an equal sharing would be consistent with past rulings and would satisfy constitutional requirements, we nonetheless believe that it would be unwise and unnecessary at this time to declare it as a general policy. It would be unwise because it could result in unnecessary financial dislocation in Vermont's electric industry. It is presently unnecessary because, until we can better estimate the magnitude of stranded costs, and

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76. For example, the write-off or write-down of uneconomic utility assets would create tax savings under current IRS regulations. This tax treatment may have the effect of reducing the overall burden of such write-offs to the utility, which should be recognized as part of the overall balancing process. Any such tax impacts would be fact-specific for an individual utility. See, *e.g.*, Docket 5132, Order of 7/31/87 at 10-29.

particularly their mitigation potential, we do not know the extent to which ratepayers can be allocated the stranded costs while still benefitting significantly from customer choice.

The unprecedented nature of restructuring provides an additional reason not to apply automatically the equal sharing allocation of uneconomic costs that our precedents would suggest. There are additional considerations that accompany restructuring: stranded costs represent a one-time transition cost; they are potentially very substantial; they very likely can be significantly mitigated; electricity markets are changing rapidly; and after restructuring, the utilities will enjoy the opportunity to earn unregulated profits.

There is no talismanic formula to which we can turn to determine a single, "correct" sharing percentage. The issue will turn largely on the equities of individual cases, and on the effectiveness of utility efforts to mitigate their potentially stranded costs. We will consider the following critical components in our evaluation:

(1) the circumstances under which the relevant costs were incurred or committed, including the degree to which specific costs resulted from regulatory mandates;
(2) the extent to which the utility demonstrates actual mitigation of stranded costs compared to the potential for mitigation;[77]
(3) comparability of that utility's overall stranded cost burden with those of other utilities;
(4) the rate impacts of stranded cost recovery on the state's consumers and the Vermont economy, after considering the affected utility's long-term rate trends in relation to rates in competing states;
(5) commercial sustainability and the effect of stranded costs recovery on the financial health of Vermont's utilities;
(6) the degree to which a formerly-regulated utility in this state implements competitive safeguards or, where required, achieves functional separation; and
(7) the public health, safety, and welfare.

These considerations will act in concert in determining the level of stranded cost recovery. We conclude that, where a utility has aggressively and successfully mitigated its stranded costs, the opportunity should exist for substantial or full recovery, when the magnitude of the post-mitigation stranded costs allows for rates that are reasonably comparable to rates in competing states. In contrast, based on the stranded cost estimates presented to us in this proceeding, substantial recovery without significant mitigation would appear to require rate levels that would not be commercially viable; this result is unlikely to be approved.

D. Process and Proceedings for Measuring and Recovering Stranded Costs

1. Staged Transition

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77. As we have already emphasized, utilities bear the obligation to aggressively mitigate these costs. Ratepayers will not be asked to pay for the failure of a utility to fulfill this obligation.

We propose a staged transition period for the recovery of stranded costs. The stranded cost transition should be completed and a final resolution of stranded costs should be made no later than December 31, 2001.[78] The first stage will be a proceeding to set an administratively-determined *estimate* of stranded costs. The last stage will be a reconciliation proceeding that results in a final determination of stranded costs. In the interim, we may have sequential proceedings that would permit adjustments to the estimate of stranded costs set at the beginning of the transition period. Below, we discuss our rationale for such a transition and provide some parameters for the proceedings to follow.

The first objective of a staged transition is to allow recovery of stranded costs to begin at the onset of retail competition, which will begin as early as January 1, 1998. Stranded costs are transitional by nature, and the sooner we begin the recovery process, the sooner we will complete the necessary period of transition.

The second objective of having a staged transition is to allow time for the market to develop and new policies to take hold. Uncertainty and change will be the dominant factor in the generation portion of the market, at least in the beginning phase of the transition. A key component of stranded cost determination is the market price of electricity in future years, which should be evaluated over a multi-year transition period. To provide certainty to both investors and customers, however, this transition period should be of limited duration. Therefore, we will conclude a final proceeding no later than December 31, 2001, in which the outstanding amount of stranded costs for each utility in Vermont will be finally determined, and ongoing transition charges set.

The third and primary objective of staging stranded cost recovery is to ensure that utilities will successfully complete substantial mitigation of stranded costs. While retail competition poses a risk to utilities that some embedded costs may become stranded, there are also significant opportunities to mitigate above-market power costs. Therefore, we propose to hold a series of workshops and proceedings to review these Utility Restructuring Plans and identify mitigation opportunities and, to the extent possible, quantify them. These proceedings will be held in conjunction with the proceeding to determine initial estimates of stranded costs. It will be incumbent upon all the utilities of the state to avail themselves of mitigation opportunities to the maximum extent possible and as expeditiously as possible; the Board will work with utilities, the Department, the Agency of Commerce and Community Development, and the Legislature to maximize these opportunities and to lower the state's long-term power costs.

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78. This is the latest date we expect this to occur. Depending upon how the transition is progressing, we may be able to hold this proceeding earlier.

2. Step 1 (1997): Estimation and Mitigation Proceedings

An initial proceeding to set an administrative determination for a rigorous estimate of stranded costs is needed. As noted earlier, any estimate of stranded costs will be highly sensitive to forecasts of market prices in the future. Secondly, we must have a fairly certain estimate of specific stranded cost dollar amounts, for specific assets, in order to set an appropriate competition transition charge. This charge must be set so that we have some confidence that when a final reconciliation occurs, there will not be undue or dramatic rate shock. Rate shock will also be minimized if we provide for periodic adjustments to the competition transition charge, to account for changing estimates of market prices, as well as to reflect the mitigation efforts of the utilities. We encourage proposals that would lend some certainty to the upper limits of the transition charge, either in the context of the Utility Restructuring Plans or through negotiated settlements.

We have considered the benefits of a "top-down" versus a "bottom-up" approach to the estimation procedure. We recognize that a top-down approach or lost-revenues approach, where one calculates the difference in overall company revenues under a regulated and competitive scenario, has the benefit of being simpler and less costly. By contrast, the bottom-up approach, where one calculates the stranded cost for each generation-related asset, is more burdensome. However, a key goal of the transition is to provide incentives and opportunities for mitigation efforts and, in order to effectively monitor such efforts, the bottom-up approach is required.

In preparation for the estimation proceeding that we propose, the utilities will be required to submit estimates of market prices and the potential stream of their stranded assets out through the year 2025. These may be provided to the Board under a protective order. Beginning the estimation process as soon as possible will provide an essential backdrop for the mitigation process, and will allow us to respond promptly to any legislative direction. In order to achieve this goal, we will undertake simultaneous review of utility stranded cost estimates. As a means of testing the utilities' market estimates, we will invite other interested parties to submit market price estimates at the same time.

Utilities should submit estimates of their stranded costs in the following categories: (1) generation assets, broken out by (a) wholly owned, (b) jointly owned, and (c) purchase power contracts (the latter category should be broken down by *(i)* QF contracts and *(ii)* other contracts); (2) the generation portion of regulatory assets broken down by (a) taxes, (b) post-retirement benefits, and (c) DSM and ACE recovery; (3) nuclear decommissioning costs; and (4) other generation costs for which utilities must show justification for inclusion. Utilities

should be aware that further refinement of these categories may be required as part of the proceeding.

In conjunction with the estimation proceeding, we will hold a parallel proceeding to determine the extent to which stranded costs can be mitigated. As part of that proceeding, we will require the utilities to break their estimates of stranded costs down into those costs they consider to be appropriate for mitigation efforts, and those costs that they claim cannot be mitigated. Each claim for recovery of stranded costs will be balanced against the potential to mitigate those costs. We recognize that determining how successful mitigation efforts have been will involve significant judgment and discretion. We do not intend for these proceedings to be overly burdensome or litigious. However, mitigation expectations for the transition period will be high and weighed against the stranded cost claims being presented to us.

We recognize that mitigation opportunities will vary depending upon the type of asset that has been stranded. Some categories of stranded costs, such as nuclear decommissioning costs, may have little or no room for mitigation. All stranded costs claimed by the utilities will be examined for their mitigation potential. After hearings, we expect to identify and set benchmarks for reducing those stranded costs identified as appropriate for mitigation. These benchmarks may be included in performance-based regulation schemes for the investor-owned utilities (see Section XIII). Whether or not reflected in a PBR scheme, these benchmarks will be used in a final reconciliation of stranded costs.

We believe it is important to have this proceeding early in the transition because we recognize that mitigation efforts will lower stranded costs only if those efforts are completed prior to functional separation or divestiture. The timing of any sale of generation assets will affect the extent of mitigation of stranded costs.

3. Step 2 (1998-2001): Adjusting Stranded Cost Estimates

As mitigation efforts move forward, we may make one or several adjustments, as necessary, to the initial administrative estimates of stranded costs. The purpose of these adjustments is to (a) capture the effects of successful mitigation efforts and (b) to take into consideration changes in the market price of electricity.

Adjustments will also have to be made as a result of the tax impacts of various mitigation efforts. Because utilities will deduct economic losses from income, their impact on corporate assets may be mitigated by the resulting tax savings. Every dollar of revenue lost as a stranded cost, leads to a shareholder loss of that one dollar minus the utility's avoided taxes.[79]

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79. Baxter, Hadley and Hirst, *Strategies to Address Transition Costs in the Electricity Industry*, ORNL, July, 1996, at fn. 2.

At an average income tax rate of 35 percent, shareholders would only realize 65 percent of these stranded costs. We will expect the utilities to take full consideration of these impacts in their subsequent stranded cost filings.

In our determination of claims for stranded costs, we will also take into consideration the historic tax treatment of the assets under consideration including: (1) the tax benefits associated with accelerated depreciation that have already been received by utility companies, (2) the investment tax credits already received, and (3) excess accumulated deferred income taxes. To the extent they are not offset by future tax liabilities, these tax benefits already received by the utility companies should be offset against stranded costs. Because utilities have previously collected a portion of those assets from taxpayers without corresponding rate reductions, utilities have already been partly compensated for their costs, and stranded costs should be reduced accordingly.

4. Step 3 (2001 or Before): Stranded Cost Reconciliation Proceeding

A final valuation of stranded costs will be part of the reconciliation proceeding that is the culminating stage of the stranded cost transition. A mixture of valuation methods will be considered for final reconciliation. We expect that regulatory assets will be valued through an administrative determination that builds upon the original estimates set at the beginning of the transition.

At this time, it would be premature to draw firm conclusions about the best method for valuing utility stranded assets. Valuation methods will be reviewed as part of our continuing investigation into restructuring. Final valuation of generation assets will most likely be made through a market approach. Divestiture possibilities include full sale after valuation, stock sales or stock splits, auctions, and spinoff of assets to subsidiary firms. For each approach, we expect there to be associated impacts, including but not limited to tax and rate impacts, and stranded cost recovery impacts. For those assets that are not divested but retained by a parent holding company, a quasi-market approach, such as appraisal that incorporates three comparable-market evaluations, may be used.

We will convene a series of workshops open to all participants, to develop the range of options open to us for the final valuation, and to develop guidelines for use in the final reconciliation proceeding. At that time, we expect to consider the value of assets that have already been divested, if any, as well as the value of assets that are to be retained. Utilities considering divestiture of assets prior to the reconciliation proceeding will be subject to these guidelines as well. In the event that maximum mitigation or a proxy for such cannot be shown, we will impute some portion of mitigation for the purposes of a final determination of stranded costs.

Once a final determination of stranded costs has been made, recovery will be structured so that utilities have an opportunity for substantial or full recovery of this final amount. This assurance of recovery of final stranded cost amounts can be provided either through the stranded cost recovery charge or in conjunction with a PBR scheme.

5. Negotiated Settlements

The three-step process set out above, for first estimating and then establishing eligible stranded cost recovery levels, raises the likelihood that reasonably accurate levels of stranded costs will be set, but it extends the period of uncertainty about these costs for both customers and providers. For this reason, we encourage all participants in this matter to engage in productive negotiations that would equitably resolve the challenge of stranded costs for individual utilities. If there are actions the Board can take to advance productive negotiations, we invite participants to suggest them.

If one or more settlements can be reached, we will review them promptly in order to bring certainty to the recovery process. Our evaluation of such a settlement, and indeed our final reconciliation standards, will be subject to the multi-factor analysis as presented in this Section, p. 76.

Benchmarks for stranded cost recovery will be directly tied to the rate trajectory over time for ratepayers. Utilities will be provided an opportunity for substantial or full recovery of stranded costs *only* where they can provide rates for customers from the onset of retail choice that are at or below the rates those customers would otherwise pay. Such a guarantee has been an integral part of the restructuring settlement that has been codified in California. A similar guarantee has been accepted by Massachusetts's largest utility and the state's attorney general.[80] As in these other states, Vermont must be able to demonstrate that, as a result of restructuring, customers will benefit from short-term rates that are lower than expected tariffed rates over the transition period and that are comparable to rates in competing states; and customers should see significant cost savings over the longer term. This is especially true if we are asking ratepayers to absorb a significant portion of the stranded costs of the state's utilities. To reduce the potential for rate increases due to the recovery of stranded costs, we invite proposals that would establish a cap on the transition charge.

We encourage the Department, the utilities, and others to continue their negotiations. If these discussions prove to be productive, we would entertain negotiated settlements prior to

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80. See California Legislature, 1995-96 Regular Session, Assembly Bill No. 1890; fn. 52.

the transition timetables we have laid out in this Order and we will support global settlements that have as their foundation the Vermont Principles.

E. The Mechanisms for Stranded Cost Recovery

1. Competition Transition Charge

The Stranded Cost Subcommittee and many other parties have proposed that the recovery of allowable stranded costs be achieved via a "wires charge." This would be a charge imposed on all retail customers using the Vermont transmission and distribution system, to be collected via the billing system of the distribution companies of the state. We agree with the positions of most of the parties that this mechanism is an appropriate vehicle for the recovery of stranded costs. We also agree that this charge should be non-bypassable, competitively neutral, and must balance the principles of fairness, equity, and economic efficiency. We will refer to this charge as the Competition Transition Charge ("CTC"). We prefer this label to others because it connotes the transitory nature of the charge.

It is our intent that the CTC should be set so that the total amount of allowable stranded costs for each utility, as determined after our review in the final reconciliation proceeding, is recovered in full from that utility's distribution ratepayers. The recovery period and the CTC may both have to be adjusted throughout the stranded cost recovery period to achieve this result. The recovery period for some stranded costs may vary according to the nature of the asset. Certain items, such as nuclear decommissioning costs, may warrant a longer recovery period.

The Stranded Cost Subcommittee proposed that a stranded cost recovery charge should be designed so that it:

- is non-bypassable;
- is competitively neutral;
- provides accelerated payments or buyouts as an option;
- balances principles of fairness, equity, and economic efficiency;
- is adequate for collecting stranded costs amounts;
- accounts for some degree of rate stability;
- is imposed on both present and future customers; and
- takes cost causation into consideration when allocating the charge among customer classes.[81]

We agree that a stranded cost charge should be non-bypassable and competitively neutral and should balance the principles of fairness, equity and efficiency. We propose to structure the CTC so that it is imposed upon all retail customers in Vermont.

We conclude, consistent with FERC's position as set out in Order 888, that at least some portion of electric service to end-use customers is a distribution service, and will be

81. Stranded Cost Subcommittee report at 19, 20.

considered as such for the purpose of imposition of the CTC. This holds true for customers that take ancillary or backup service for end-use purposes, as well as for end-use customers who take service at transmission voltage or under a transmission tariff. It is our intent, consistent with the position of most parties, that the CTC shall not be bypassed by any end-use customer.

Some participants in this proceeding have discussed whether such a charge should be computed as a statewide amount and imposed as an average charge on all the state's customers, or should be specific to each utility. The argument in favor of a statewide mechanism is that it would spread the cost of restructuring to all ratepayers on an equal basis. The argument against a statewide mechanism is that it would be unfair to ratepayers in a service area where a utility has been structured and managed so that its stranded costs are low, while providing a windfall to ratepayers of utilities with high stranded costs. While there is considerable merit to the collection of uniform statewide charges for statewide public benefit programs, we do not adopt the same principle with respect to stranded cost recovery charges. Historically, utility rates in Vermont have been highly variable. This will continue, but will diminish, through the transition period. Since customers will benefit from lower rates due to customer choice, no utility's customers will be harmed by a rate that assigns each company's stranded cost recovery to customers in its historic service territory. This "no harm" result could not be ensured if stranded costs were pooled and collected statewide.

2. Carrying Costs

While Vermont utilities under cost-of-service regulation have had an opportunity to earn a rate of return on their investments, to the extent that utilities are guaranteed some recovery of stranded costs through a transition charge, some consideration must be taken for the reduced risk that guaranteed recovery provides. We observe that once the level of stranded cost recovery has been determined, and non-bypassable charges established, the utility will face little risk that it will not recover those allowable costs. Accordingly, we will be able to adjust downward the rate of return employed in calculating the stranded cost recovery charge, passing these savings on to Vermont customers. We would expect to consider this reduced risk when setting a return on stranded generation assets in the context of individual utility proceedings.

3. Accelerated Payments or Buyouts by Customers

The Stranded Cost Subcommittee and other parties propose that utilities have the option of offering customers accelerated payments or a lump-sum buyout payment for stranded costs. Accelerated payments or early buyouts pose administrative problems in that the final

determination of stranded costs will not occur until late in the transition period. If a buyout is allowed early in the transition, it is possible that a final reconciliation of stranded costs could differ significantly from the buyout amount. We are concerned that not all customers would have an equal opportunity to avail themselves of such an option and we must ensure that costs will not be shifted from "buyout" customers to other customers. This problem could be resolved through bilateral agreements between utilities and customers, with terms that would ensure full recovery of customers' shares of stranded costs while hedging the risk over the adjustment period. This option can be more fully explored in later proceedings.

4. Recovery Mechanism Design

The specific design of the CTC raises significant rate design considerations, and should be guided by historic rate design principles: fairness, equity, economic efficiency, and adequacy. While we have considered the parties' positions on this matter to date, we believe this matter warrants further specific consideration of all options including a fixed charge, demand-based charges, volumetric charges, or some combination of these. This will be the subject of future proceedings, most likely held in conjunction with the utilities' stranded cost estimation proceedings.

5. Creative Options for Financing Recovery Charges

As Vermont embarks upon a dramatic financial restructuring of the state's electric system, it will be important to seize every realistic opportunity to lower the costs of the transition, for the benefit both of utilities and their customers. The parties' calculations of stranded costs and related recovery charges include substantial charges related to the time value of money; partly because power cost commitments will increase over time, and partly because early-year losses and charges are expected to be recovered over future years.

Transition costs can be reduced if these carrying costs can be lowered, a result that can be achieved through a risk-reduction and refinancing program. We believe that a substantial portion of the final stranded cost recovery amount can be financed through specially-authorized utility revenue bonds, secured through the assignment of CTC receipts. As other states are learning, lowering the risks associated with legitimate stranded cost recovery will lower the ultimate cost of paying for them.[82]

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82. For example, California has enacted legislation that authorizes utility revenue bonds for the refinancing of a portion of the utilities' stranded costs. This is intended to lower costs and enable rate reductions of 10 percent by 1998 and 20 percent by 2002, for all the state's residential and small

We believe that such financing options should be investigated for their potential to lower the carrying charges of the stranded cost amounts we finally determine should be recovered from ratepayers, and we will support legislative action to deliver these savings to Vermont households and businesses.

F. Treatment of Stranded Nuclear Costs

There are many uncertainties regarding potential stranded costs associated with nuclear generation. Indeed, there is considerable uncertainty about the role that nuclear generation will play in a restructured industry. Although Vermont Yankee is located in-state, nearly one-half of its output is sold elsewhere.[83] We must ensure that the burden of stranded costs associated with this plant is not unfairly borne by Vermont ratepayers. It is also incumbent upon us to ensure the safety and environmental integrity of the facility.

We agree with the Department that there is a need for an in-state process to plan for the decommissioning of Vermont Yankee.[84] Without suggesting specifics at this time, we can identify two basic principles for the recovery of stranded costs associated with nuclear plants. As with other power supply costs, utility investors should be fairly compensated for sunk costs in nuclear facilities that are unrecoverable due to structural changes in the generation market for electricity. However, decisions made on a forward-going basis should be subject to competitive market standards and incremental costs, including incremental decommissioning costs, should not be eligible for stranded cost recovery.

Based on the limited record before us, most of Vermont Yankees's decommissioning costs appear to be unavoidable sunk costs and therefore eligible for recovery through the CTC. Approximately one-third of the costs associated with decommissioning have already been collected through an industry-wide kilowatt-hour charge and dedicated to special trust funds. However, despite significant consensus on this issue, participants have identified some aspects of decommissioning costs that are still in dispute and need further review.

Other costs associated with nuclear generation will require even more detailed review. We are open to suggestions from the participants in this Docket on the best approaches to examine these costs. We invite regional discussions on this issue to explore the benefits of a

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commercial ratepayers. The legislation was designed to extend the amortization period for stranded cost recovery out to ten years, and eliminate state taxes on the bond proceeds. The authorization is secured by CTC revenues, not by the state government. Pennsylvania's recent legislation contains similar provisions.

83. DPS, 6/20/96 at 60.

84. *Id.*

coordinated, New England approach. The benefits of achieving some degree of certainty on this issue are significant in light of Vermont's and New England's historic reliance on nuclear generation.[85]

85. During the past summer, over fifty percent of New England's installed nuclear capacity was taken off-line. In late September, the owners of Connecticut Yankee announced that refueling operations would be postponed until after a decision was made, based on new cost estimates, on whether to permanently shutdown the reactor. That decision—to permanently shut the facility down—was made by Northeast Utilities on October 9, 1996. These recent experiences highlight the sensitivity of the region's nuclear generation plants to operational, regulatory, and market risks.

VII. Recognizing the Unique Attributes of Public Power

Vermont has fifteen municipal utilities, including Burlington Electric Department, ("BED"), and two cooperative utilities. Many aspects of these systems distinguish them from their investor-owned counterparts. A significant share of municipal ratepayers are located outside the respective municipality and have no voting rights or control of their local utility.[86] These systems operate with tax exempt financing (free from federal and state taxes) and without equity investment. Electric rates are designed only to cover the costs of running the utility, including debt financing. These systems realize the value of local control and community-based decision-making with discussions of public power issues often held in public forums. With the exception of BED, which is the fourth largest electric utility in the state, these systems typically have a very small customer base with significantly fewer than 15,000 customers.

The Board sees a vital role for public power in a restructured utility environment. Public power has long provided, and will continue to provide, its ratepayers with a strong voice in the decision-making processes of their electric companies. In a restructured environment, municipal and cooperative Discos will continue to operate according to their traditional structures of governance: member/ratepayers will be actively involved in the management of, and investment in, the distribution facilities. Furthermore, under our proposal, ratepayer participation could extend to fundamental decisions relating to the role of the municipality in the development of, or joint participation in, competitive wholesale and retail entities (including ownership of generation).

As set out in Section IV, the participation of public power in competitive markets, for example, through the establishment of retail cooperatives such as the Consumerco, can provide consumers with attractive alternatives for energy services. In addition to establishing independent retailers, controlled as separate retail entities, municipalities could form one or more publicly-owned, joint-action agencies, potentially serving the entire state.

While expressing our strong support for public power, we must, however, also note that risks associated with competitive generation and retail service create additional concerns for both historic and future investments in those areas of operation subject to market forces. These concerns are highlighted by the fact that the municipal property taxpayers typically bear the burden of the electric department's investment risk through general obligation ("GO") and revenue bonds, and by the fact that ratepayers who reside outside the municipality do not share

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86. Approximately 30 percent of municipal ratepayers are located outside the boundaries of the municipality whose electric department serves them.

that same burden. Restructuring must address both of these unique aspects of municipal utilities.

We support the continued ownership and operation of local distribution utilities by consumers and municipalities, and the privileges of local control that accompany such ownership. At the same time, we conclude that the customers of these systems should be assured the same access to markets for retail and generation services as the customers of Vermont's other utilities. While public power entities would not have a profit motive for engaging in anti-competitive market behavior, we nevertheless expect that reasonable guidelines and protections will need to be established in order to ensure meaningful competitive retail access for the customers in the service area of the municipal or cooperative distribution company. Consequently, such Discos will need to operate under standards of conduct similar to those found appropriate for investor-owned Discos with retail marketing affiliates.

In the face of direct retail access, it is likely that municipal utilities, and the taxpayer owners of municipalities, will face substantially greater risks than they have in the past. In the following sections, we propose mechanisms to equitably manage those risks so that municipal taxpayers are protected during the transition to a competitive market.

A. Non-Profit Retail Service Access

In general, we recommend that the customers of non-profit utilities be afforded the same opportunity to access competitive retail service providers as those of the investor-owned utilities. No municipal or cooperative utility in this proceeding has opposed competitive direct access for their customers. The customers of these publicly owned utilities should not be denied access to these markets by virtue of their location in the service territory of a publicly-owned utility.

As described below, the array of consumer options available to public power customers would include a Basic Service Offer available through the municipal Disco. Customers of a traditional electric company would also be assured access to a continuing service offer as described in Sections IV, V, and XII. The generation resources of the traditional electric utility could then be used in providing one or another of these service options. To the extent that the public power utilities establish separate retail operations, the customers in those service areas, and potentially beyond, will have access to the new services that are provided by those entities. Finally, customers of these utilities will have access to any other service provider offering service in the market.

B. Retail Service Provision by Municipal and Cooperative Utilities

We conclude that traditional municipal electric companies could continue to provide service in one of two ways. First, the municipal utility may continue to offer an integrated retail electric service as a single entity. As described below, we recommend that certain restrictions accompany the participation of integrated utilities in competitive markets. Second, the municipality may by itself, or with other public power entities, form a separate municipal retail entity (or "Munico").

Under the first approach, the customers of the traditional municipal electric utility may rely on the Disco utility for all or for a portion of its retail and generation services. In Section XIII, we propose that existing distribution utilities establish a transitional commitment to a stable priced, continuing service offer. We propose that the traditional municipal utilities and the resulting Disco also provide such service commitments. Customers within the service area of the traditional franchise would then be assured access to a stable price offer for traditional utility services until those customers choose another service provider. Under such a proposal, municipal Discos would have the opportunity to provide customers inside their traditional franchised service area with a packaged electric service that includes both generation and wires services. These assurances could be provided directly by the municipal Disco, its municipal affiliate retail company, a third-party retail service provider or some combination thereof.

Retention of generation resources by municipal Discos in an open market environment with customer choice could expose the utility and the municipality to greater financial risks than they have borne historically. We encourage municipal systems to segregate the risks of future operations in the market through the separation or sale of generation assets, and/or adoption of appropriate financial or insurance mechanisms. We believe that municipal taxpayers and managers should be discouraged from making investments in new generation resources that present significant new financial risks. Nevertheless, under the Board's proposal, municipal utilities can retain their current entitlements to generation resources, and can maintain and upgrade facilities on a non-speculative basis. However, at a minimum, municipal taxpayers *must* be fully informed of the risks associated with Disco plans to retain generation resources while entering into competitive generation or retail markets.

In light of these concerns, we propose that new investments in competitive assets needed to meet retail load be secured through debt instruments that impose little risk on the assets of, or new claims upon, the municipality of the Disco. It appears to us that appropriately-designed revenue bonds would satisfy this objective. Furthermore, we conclude that the risks to the franchise utility customers and municipal taxpayers may be further reduced by establishing an additional constraint on retail service expansion. In a competitive environment, municipal Discos should be free to sell the output of their existing resources to customers outside their traditional franchised service territory, in order to replace load lost to

competitors. Nevertheless, if unconstrained, such retail expansion could impose inappropriate risks on the municipal Disco and municipal taxpayers. We propose, therefore, that the retail load of the Disco be capped at a specified level, set as a proportion of the traditional load of the franchised utility. Retail load for a utility might be constrained at, for example, 125 percent of the 1996 historic load. Load growth beyond such a threshold might then trigger a financial segregation mechanism, or a structural separation or divestiture requirement.

A second approach to providing retail service by a municipality is by establishing a retail corporate municipal affiliate, which the municipal utilities have referred to as a "Munico" in their filings in this investigation. A Munico may provide unlimited service inside or outside the franchised service area of its Disco. The proposal of the municipals to form these Municos parallels the proposal of the Consumer Representative, the DPS, and Washington Electric Cooperative, Inc. ("WEC") to establish a "Consumerco." So long as non-profit retail service providers impose no new claims on the resources of the non-profit distribution company, the municipality, or other public entity, we believe that the establishment of such non-profit retail affiliates will benefit consumers and increase customer choice.[87] A public-purpose charter requirement for such retail establishments may increase consumer confidence in the services that are purchased through such providers.

We conclude, however, that the municipal Disco and the taxpayers of the municipality should be free of any undue financial liability associated with a property claim arising from such an entity. At a minimum, the newly organized company should not create any new claims on the property of the municipality or the municipal Disco. We also believe that assets transferred from a cost-regulated electric utility to any competitive one should be transferred at the market value of the resource. One exception would be resources that are transferred, but for which rights to service remain exclusively with the municipal Disco or its customers at cost. All resources remaining with the Disco will remain regulated on a cost-of-service basis.

C. Standard for Stranded Cost Recovery

As a matter of equity, and as a practical matter, we propose that non-profit utilities should be accorded timely recovery for historic commitments made in fulfillment of their franchise obligations. While the legal standard for recovery is the same for all utilities, the

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87. BED notes that this restriction appears to prevent a municipality from accessing its customary funding mechanisms and therefore prevents it from creating municipal retail companies. BED, 11/18/96 at 9. We believe that appropriately designed revenue bonds should be adequate in addressing the concerns raised by BED.

public policy basis for sharing unrecovered market losses between the owners of non-profit utilities and ratepayers is not compelling. Nevertheless, these utilities face obligations with respect to mitigation, comparable to their investor-owned counterparts. Failure to prudently mitigate utility costs must serve as grounds for a disallowance of unrecovered stranded costs.

In order to meet the considerable financial demands of their utility operations, municipalities have issued debt in the form of both general obligation and revenue bonds. The issuance of such bonds requires voter approval; however, the taxpayers do not expect, and do not receive, interest payments or a return on equity for their vote and support of the bond offerings. Consequently, there is little equitable ground for considering that the risk of loss from the transition to competition should be visited upon those taxpayers. Given the nature of the debt, it is appropriate to consider that a default of any debt issued by a municipality will be likely to adversely affect municipal borrowing opportunities for other purposes. Because any sharing of stranded costs would simply translate a reduction in rates for ratepayers into a corresponding increase in taxes to municipal taxpayers, we conclude that any sharing of prudently-incurred above-market costs by municipal utilities would be poor public policy.

Therefore, all bonds issued by municipalities to underwrite electric operations prior to the issuance of this report that are backed by the good faith and credit of the municipality or are backed by the earnings of the revenue-producing municipal electric utility should be accorded timely debt recovery in accordance with the original provisions and legal rights and obligations of the debt so as not to impact unfairly the taxpayers of a municipality.

Under Federal and Vermont law, the legal structure of cooperatives differs from that of municipal and investor-owned utilities. Under that structure, the property of the members is not pledged to secure the debts of the cooperative. The cooperatives' principal creditor, the Rural Utilities Service ("RUS"), is as a matter of state and federal law an investor earning returns on funds advanced to the cooperatives and it can, like other lenders, negotiate or accept write-downs of its borrowers' debt.[88]

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88. This would not be unusual. In September of this year, the RUS wrote off $982 million—over 80 percent—of the debt of Soyland Power, an Illinois cooperative with substantial investments in nuclear generating facilities. And again, in October, the RUS wrote off another $530 million of its loans—this time to the Deseret Generation and Transmission Cooperative, based in Utah. "U.S. Is Giving Electric Co-ops Relief on Loans," Wall Street Journal, 10/3/96 at A3.

In addition to its role as principal lender, the RUS has exercised significant supervision over Vermont's cooperative utilities and, therefore, bears a share of the responsibility for the above-market investments that the cooperatives may have made.

For these two reasons, the financial underpinnings of cooperatives are fundamentally different from that of either municipal or investor-owned utilities. The implications for stranded cost recovery are uncertain at this time; we note, however, that in regard to the treatment of creditors, cooperatives are more like investor-owned than municipal utilities.

The Board has previously reviewed this question in the case of the Vermont Electric Cooperative, Inc. Dockets 5810 *et al.*, Order of 2/8/96; Dockets 5630 *et al.*, Order of 12/30/93 at 7.

VIII. Assuring Consumer Protection and Addressing Low-Income Issues

A. Consumer Protection

Because of the essential nature of electric service and associated health and safety concerns, consumer protection has long been a central priority of electric utility regulation. Traditionally, monopoly power, safety, and service quality issues have been overseen by the Board and Department. In a competitive market, consumers will rely increasingly on the existence of multiple service options and alternative providers to provide certain protections. Nevertheless, movement toward a more open and competitive market creates concerns, not only about the potential loss of existing protections, but also about other competitive abuses arising from a restructured industry.

The Consumer Protection and Low-Income Subcommittee established a broad framework of consensus on matters of consumer protection. We agree that current consumer regulations and policies should be maintained and that new consumer protections will be needed in a restructured electric energy market. Furthermore, there is a broad consensus in support of the Department's proposed "Consumer Bill of Rights," which we also endorse. We conclude that existing institutions -- specifically the Board and Department -- should remain empowered to resolve continuing electric consumer protection issues, and should also be given appropriate authority to deal responsively with new and emerging issues.

1. Regulatory Authority for Consumer Protection

As discussed elsewhere in this report, the existing authority of the Public Service Board over electric utility companies should remain in place wherever is reasonably necessary. The ability of the Board to investigate abuse, monitor monopolistic utility earnings through cost-of-service regulation, and to enforce consumer protection rules will assure continued consumer protection. In addition, the DPS's Consumer Affairs Division will be needed to swiftly and efficiently resolve customer disputes. Together, the Department and the Board should continue to secure the broad protections currently enjoyed by Vermont's ratepayers.

We also conclude that the Board's jurisdiction over consumer abuses should extend to new competitive providers, who, like competitive telecommunications providers, should be subject to regulation as public service companies under Title 30. Consumer protection and enforcement standards can be established in an appropriate regulatory proceeding, but should

extend to matters of unfair trade practices, such as fraud and misrepresentation.[89] Finally, the Board should be authorized to revoke licenses for cause, or impose reasonable sanctions including corrective orders, penalties, and license suspension upon a finding of inadequate service or abuse by a licensed service provider.

2. Public Advocacy, Consumer Complaints, and Regulatory Oversight

The CP&LI Subcommittee also observed that, at least during the transition, there will be an increased need for consumer advocacy.[90] Increased advocacy and new classes of potential competitive and consumer abuses may also create a need for additional personnel to process and decide disputes among market participants, and between market participants and consumers.[91] Although these burdens may be temporary in nature, the likelihood of increased activity may require special mechanisms that will ensure administrative efficiency in the processing and resolution of disputes.

Consumers must be assured that Vermont will have adequate institutional capability adequate to serve their needs. As part of our transition plan, we recommend that the Board and the Department create appropriate alternative dispute resolution mechanisms and that they obtain necessary support staff to manage this expected increased workload. These regulatory oversight functions can be funded through traditional means, and all competitive service providers should be subject to these funding requirements.[92] The Board and Department should monitor these activities and tailor funding and staffing needs over time to reflect the character of the administrative burdens.

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89. The CP&LIS noted that unfair trade practices should be prohibited. For example, just as "slamming" is forbidden in the telecommunications arena, consumers' electric service cannot be transferred from one company to another without the consumer's written consent on a standard disclosure form, with the exception of transfers or disconnections for non-payment or other appropriate causes. CP&LIS at 3. Whether through written consent or other independent verification, we believe that provisions should be created to minimize the potential for abuse, and to penalize service providers for abuses when they occur.

90. CP&LIS, at 3.

91. Press, 3/22/96 at 17.

92. As BED observes, the costs of consumer protection should be borne by the service providers who have generated these costs. BED, 11/18/96. Although not the only consideration, cost causation should be a key principle in guiding funding mechanisms on consumer protection matters.

3. Service Quality Standards and Monitoring

Reliable electric service is essential to Vermont's households and businesses. Therefore, the integrity of the transmission and distribution network must be maintained or improved. The Board should set high reliability and service quality standards, and establish performance-based incentives for their achievement. Minimum service quality and reliability requirements can be set on the basis of recent Vermont experience, evolving standards in other states, and cost and other relevant data.

4. Privacy and Customer Information

As discussed in Section V, competitors should be assured that no single provider of retail or generation services has a unique advantage in accessing system or customer information. Furthermore, as the CP&LI Subcommittee noted, consumers should have a right to privacy and protection of particular customer information available exclusively through their local distribution company.[93] Such information—for example, customer-specific load profile data and detailed billing histories—must not be inappropriately distributed to retail service providers without customers' express approval. Assurances of bill payment by competing retail service providers is best assured through traditional deposit requirements and credit references from credit agencies or other retail service providers. The details of these information restrictions should be determined in a separate regulatory proceeding.

5. "Consumer Bill of Rights"

The Department has proposed a "Consumer Bill of Rights," which has received support from a large number of parties to this investigation.[94] The essential elements of the Department's proposal are as follows:

(1) Consumers shall have the right to know and control what they are buying;[95]

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93. CP&LIS at 3. BED notes that information on the customers of a municipal utility could be found to be be subject to public disclosure law. BED, 11/18/96 at 11. If so, a modification of the law would be in order. We intend to work with municipalities to ensure that the principles of this report and the privacy rights of municipal consumers are adequately protected in a restructured industry.

94. See, for example, GMP, 7/3/96 at 14; Associated Industries of Vermont ("AIV"), 8/9/96 at 2; and VECC, 8/2/96 at 4.

95. We interpret this right as extending to the location, fuel type, and emissions characteristics of the generation sources used to provide the retail service.

(2) Consumers shall have the right to know from whom they are buying;
(3) Consumers shall have the right to know the full price of the goods and services that they are purchasing;
(4) Consumers shall have the right to reasonable payment terms;
(5) Consumers shall have the right to fair treatment by all providers, including clear and stable divisions of responsibility;
(6) Consumers shall have the right to join with other consumers for mutual benefit;
(7) Consumers shall have the right to impartial resolution of disputes;
(8) Consumer shall have the right to reasonable consideration for service failure or missed appointments;
(9) Consumers shall have the right to participate in the design and evaluation of restructuring;
(10) Consumers shall have the right of access to service regardless of disputes with other retail providers of electricity as long as distribution charges are paid;[96]
(11) Consumers shall have the right to be free of improper discrimination in price, terms, conditions, or offers.[97]

We adopt the principles embodied in the Department's proposal and have relied on them in forming the proposals contained in this report.

B. Low-Income Protections and Assurances

Sweeping changes in the electric industry, including many recommended in this Report, are occurring at a time when low-income households are facing increasing costs for essential goods and services, especially home heating bills, regardless of fuel type. The benefits provided under the federal Low-Income Home Energy Assistance Program ("LIHEAP"), embodied in the state's Fuel Assistance Program that extends to all fuels, have diminished over time and the program's future remains uncertain. Here in Vermont, the Legislature created a home heating assistance program that partially offsets the loss of federal funds. However, neither the federal or state program was designed to provide more than heating assistance.

While acknowledging the need for low-income program assistance, the apparent consensus achieved through the CP&LI Subcommittee on a funding mechanism based on a non-discriminatory charge on electricity customers was challenged in later filings and stages of

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96. By distribution charges, we mean to include only charges for services provided by the distribution company, including the Basic Service Offer of the Disco.

97. By "improper" discrimination, we mean discrimination that is illegal under existing law and that is contrary to the consumer protection and certification requirements imposed on all retail service providers.

this investigation by user groups represented by the VECC and AIV.[98] It is critical that any proposal for customer choice directly address the needs of low-income consumers.

1. Vermont Home Energy Assistance Program

In our Interim Order, we proposed an "all-fuels, broad-based" funding mechanism for supporting the energy needs of low-income consumers. By "all-fuels" we mean to assure assistance in a manner that does not discriminate among low-income consumers according to their principal home-fuel types. By "broad-based," we mean a program that is funded through the state's broad general taxes or, at a minimum, through a competitively-neutral charge on all major fuel types. The Board continues to support such a mechanism. The proposal has received broad support in this proceeding.[99]

In the absence of a broad-based low-income assistance program, we propose that the Legislature authorize targeted assistance for some portion of the electric bills of low-income households through a sustainable, non-discriminatory charge on all electric customers, consistent with the recommendations of the Consumer Protection and Low Income Subcommittee.[100]

We conclude, however, that programs targeting consumers of a single fuel type such as electricity could, unless limited, promote inefficient or uneconomic use of that energy source. Programs funded through a surcharge on a single fuel may also lead to unnecessary market distortions. The Board's proposal is intended to minimize the potential for such distortions.

The Board supports the recommendations of the CP&LI Subcommittee that programs should take into account income and other sources of assistance, family size, and the relation of electric bills to income and to overall energy bills. Program eligibility should be certified by a designated program administrator, independent of utilities and energy providers.[101] We

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98. See, for example, VECC, 6/19/96 at 25; AIV 8/9/96 at 3.

99. See, for example, CVPS, 6/19/96 at 7; VNRC, 6/19/96 at 7; and VECC, 7/3/96 at 15.

100. The CP&LIS report established that (1) affordable access to electricity must be assured through targeted programs, (2) targeted assistance should not distort incentives to acquire energy efficiency resources and should encourage energy efficiency program participation, (3) the benefits (avoided costs) to the utility should be recognized in the program design, (4) the program should be adequately funded through a charge on electric service, and (5) benefit eligibility and administration should be managed through centralized and statewide means. CP&LIS 3/25/96 at 3 and 4.

101. CP&LIS, 3/25/96 at 3 and 4.

also adopt the other recommendations of the CP&LI Subcommittee that (1) program participants should be expected to apply for other available energy assistance programs, such as LIHEAP and (2) that the program should be structured to encourage efficient use of energy resources.[102]

2. Disconnection Policies

Health and safety concerns have driven the development of Vermont's disconnection policies, requiring adequate notice and an opportunity to negotiate repayment plans, and limiting the ability of utilities to disconnect customers during the winter months. As stated earlier in Section IV, even in a restructured electric industry, existing disconnection policies will continue to be observed. At this time, we propose that disconnects should be permitted only when customers have failed to pay their Disco charges, including charges associated with the Disco Basic Service Offer.

The question of whether billing disputes arising from failure to pay for the energy services of a retail service provider should provide grounds for disconnection deserves fuller consideration. At this point, we conclude that customers should not be disconnected for non-payment of a Retailco's bill. At least during the transition, retail service providers will be required to provide suitable notification of service termination as a condition of certification or license to operate in the state. Both the Disco and the retail customer will be notified of a date on which service is to be terminated, at which point service under a Disco's Basic Service Offer shall begin. Retail service providers will be permitted to require reasonable deposits[103] or appropriate credit references before providing service.

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102. CP&LIS, 3/25/96 at 3.

103. Reasonable deposit requirements would be tied to the level of expected bills over a specified period of time.

IX. Delivering Energy Efficiency To Vermont Consumers

A. Goals

As reflected in the Vermont Principles, and incorporated in the recommendations of the Negotiating Group's subcommittee report, energy efficiency improvements are an essential public benefit of the current electric industry that must be incorporated into restructuring proposals. Utility-sponsored energy efficiency programs have already secured the installation of measures that will save Vermont ratepayers hundreds of millions of dollars in energy costs.[104] This stream of savings must not be lost in the transition to competition. The energy efficiency subcommittee also identified a number of ways that energy efficiency programs could be delivered in a more competitive electric industry, and suggested some mechanisms for funding and evaluating particular investments.[105]

We specifically endorse those proposals that advocate a shift to market-driven programs.[106] However, during the transition period to these market-based programs, mechanisms to maintain or expand the current acquisition of cost-effective resources must also be developed. In addition, we are persuaded that there is a strong likelihood that market barriers will continue to impede consumer acquisition of all cost-effective energy efficiency measures even *after* the establishment of competitive generation markets and the functional separation of traditional utility companies. Those market barriers will need to be addressed to ensure that Vermont consumers realize the benefits of improved efficiency in electrical use.[107]

We endorse the positions adopted by other New England State Commissions that reflect a commitment to transitioning energy efficiency programs to market-based mechanisms in a gradual manner that avoids abrupt shifts and dislocations. We invite comments from participants in this process on how that can be most effectively achieved.

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104. Based on annual DSM reports filed by most Vermont utilities, net societal savings from five years of programs total over $230 million dollars.

105. Energy Efficiency Subcommittee Report at 2-3.

106. See, generally, participants' filings of 3/25/96 and 6/19/96.

107. We note that restructuring of the electric utility industry does not alter the underlying public policies articulated in 30 V.S.A. §§ 218c and 202.

B. Strategies for Acquiring Energy Efficiency Resources

Currently, the responsibility for acquiring societally cost-effective energy efficiency resources resides with the vertically integrated electric utility. Because the utility is purchasing, transmitting, and distributing electricity to consumers, the utility is best able to evaluate the relative costs of supply-side and demand-side resources. The current standard for making such evaluations is the full cost, or societal test.[108] In a restructured industry, the generation, transmission, and distribution of electricity will be provided by separate entities[109] with no one entity well positioned to evaluate the societal benefits of particular energy efficiency measures. To address this situation, and ensure that the current benefits being realized through integrated resource planning continue in a restructured industry, we propose a comprehensive strategy for efficiency, with four separate program elements.

1. Distribution Utility Programs

The distribution utility company (Disco) should be responsible for identifying opportunities to reduce the cost of delivering electricity to consumers. As many participants have noted, these opportunities will include upgrading distribution lines, transformers, and related equipment to reduce line losses, installing localized generation resources to enhance power quality and reliability, and acquiring demand-side resources from consumers. Some participants suggest that distribution utilities should employ only the "utility test" to determine the cost-effectiveness of DSM investments.[110] They argue that the only efficiency savings of value to the Disco are those related to reducing the cost of delivering electricity (which may include avoidable distributed generation facilities, such as photovoltaic arrays or fuel cells installed to support distribution functions). However, because Discos will remain regulated monopolies subject to the statutory requirements of providing service at the lowest total cost to society, it seems appropriate that the unpriced environmental costs of electricity distribution

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108. As adopted by Vermont statute and Board Orders, the societal test incorporates utility and customer costs for energy efficiency measures, which are adjusted downward by ten percent to reflect the reduced risk of these investments as compared to supply-side investment, and compares them to the avoided costs of generation, transmission, and distribution, which are adjusted upward by five percent to reflect the non-internalized costs of generation (primarily adverse air, water, and land impacts).

109. The precise nature of that separation is discussed in Section V, p. 33 of this Report.

110. The utility test estimates the utility cost for a particular measure and compares it to the saving that the utility would realize over the life of the measure. If savings exceed costs, the measure is cost-effective.

and generation be taken into account when assessing the cost-effectiveness of distribution utility DSM programs.[111] This conclusion raises certain questions (most notably, how to calculate the avoided environmental impacts of generation by a company that owns no generation resources), and we invite the participants to comment on this question in the implementation proceedings.

Furthermore, we note there is likely to be greater efficiency of program development and implementation of other program elements through a single statewide entity, rather than by twenty-two separate Discos. These limitations reinforce the need for efforts to acquire statewide consumer benefits through energy efficiency programs that continue to use Vermont's established societal test based on a statewide average of generation costs and appropriate environmental considerations and risk adjustments. We conclude that while Discos may be involved in many elements of program delivery, they will not be the optimal entity for planning statewide public benefits programs.[112] Statewide programs are discussed, below, at page 105.

2. Codes and Standards

The energy efficiency subcommittee identified the important role that codes and standards can play in acquiring certain energy efficiency resources. Performance standards for new construction, appliance standards for refrigeration, air conditioning, and heating equipment, time of sale efficiency upgrades for existing dwellings, and lighting codes are a few of the options available. We observe that the appropriate codes and standards can achieve some of the goals of current utility programs that focus on equipment replacement, remodeling and renovations, commercial and residential new construction, and commercial lighting. To the extent that codes and standards can replace utility efforts, there are likely to be administrative and implementation savings to utilities while maintaining consumer savings and benefits. We encourage the participants in this Docket to promptly and seriously evaluate the opportunities for implementing codes and standards that will achieve or exceed the current levels of cost-effective energy efficiency resource acquisition.

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111. We do not, however, mean to include the benefits of savings associated with generation resources that are priced in the market.

112. For distributed utility planning, we envision a streamlined IRP process to govern the essential functions of the Disco and to determine whether load management and efficiency activities can provide cost-effective alternatives to distribution system investments.

3. Market-Driven Programs and Market Transformation

Almost all participants have commented on the benefits of shifting current utility-sponsored energy efficiency programs to market-based programs. To the extent that market barriers can be eliminated, consumers will be able to acquire energy efficiency resources in the same way that they make hundreds of other choices: by comparing the value they receive from a particular purchase to the price they pay, and in consideration of other purchasing opportunities. Utility energy efficiency programs have assisted in market transformations in the following examples: increased stocking of energy efficient motors by suppliers; increased marketing, specification, and installation of electronic ballasts; increased shelf space and customer awareness of compact fluorescent lamps; and the increased specification by designers of high-efficiency heating and ventilating systems. We believe that there is significant potential for continuing market transforming activities, both through electric sector programs and other regional and national initiatives.[113] However, the extent to which current utility efforts in Vermont can be replaced by market-based programs and the timeframe in which this transformation can occur are uncertain at this time.

4. Statewide Benefits Programs

Many participants have stated that during the transition to more market-based programs and the adoption of codes and standards, *and even after that transition period*, there will remain a need for cost-effective energy efficiency programs designed to overcome remaining market barriers. If vertically integrated utilities are no longer available to screen measure costs against the societal costs of generation, some other mechanism must be established to ensure that these important societal benefits are acquired in a timely and cost-effective manner. If markets were perfect, environmental impacts were priced, energy subsidies were eliminated, and consumers had complete information and access to capital, choices among fully-priced energy and efficiency options could be left to markets alone. That world does not exist and is not likely to arise anytime soon. Consequently, we are not persuaded that market barriers will disappear once retail choice is available. We conclude that as part of our efforts, we must develop mechanisms and procedures for identifying, funding and delivering statewide energy efficiency programs. These mechanisms are described in the following sections.

C. Funding for Statewide Benefits Programs

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113. See *Market Transformation in a Changing Utility Environment*, NARUC, 3/4/96.

We adopt a funding proposal that incorporates the recommendations of the Negotiating Group's Energy Efficiency Subcommittee: an appropriately structured, non-discriminatory, non-bypassable charge. We conclude that the most appropriate structure is a wires charge collected by the distribution utility. As advocated by many participants, a distribution utility wires charge achieves administrative simplicity in both the assessment and collection of the revenues while ensuring that all recipients of end-use service contribute fairly and equally.[114] Initially, the revenues raised from this System Benefits Charge (SBC) will fund the continuation of cost-effective utility energy efficiency programs during the transition to distribution utility programs, codes and standards, market-based initiatives, and statewide benefits programs. After that transition, SBC revenues will fund the statewide benefits programs, which will likely include additional efforts to shift energy efficiency programs to market-based initiatives or codes and standards.[115]

D. Spending for Statewide Benefits Programs

We endorse the recommendation of the Negotiating Group's Energy Efficiency Subcommittee that a system benefits charge should be subject to an ongoing evaluation of the need for and the size of the charge. At the outset, as utilities separate their generation, transmission, distribution, and retail functions, the SBC will need to be adequate to maintain current levels of cost-effective energy efficiency resource acquisition. This is a different standard than requiring current levels of energy efficiency investment. We conclude that the proper standard for setting the SBC charge involves evaluating the amount of cost-effective efficiency resources available in Vermont and then targeting a specific amount of those resources on an annual or longer term basis. As a general matter, we expect total statewide spending on efficiency programs to remain at historic levels, that is, at about two to four percent of total electric system revenues. However, utilizing market-based mechanisms or

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114. At this time, we reach no conclusion on the precise structure of the wires charge. We invite comments on the appropriateness of volumetric (per-kWh charge), fixed (either demand or customer charges), or a combination of approaches. In essence, this is a rate design issue that can be resolved in subsequent proceedings. Equity concerns associated with the distribution of efficiency services can be addressed in the development and administration of the statewide programs.

115. As with current programs implemented by the state's distribution utilities, we continue to believe that cost-effective programs should be qualified on a total resource cost basis, and should not be constrained by a rate-impact test that leaves out important program benefits to the state's economy and environment.

adopting standards and codes are strategies that can reduce the amount of resources that are targeted through the SBC. Although other states have adopted pre-set formula for energy efficiency expenditures,[116] we conclude that a pre-set formula approach should only be a starting point.[117] To capture the dynamic nature of the energy efficiency resources the SBC should be adjusted over time to avoid over-spending or under-spending as resource costs fluctuate and technology changes.

E. Delivery and Evaluation of Statewide Benefits Programs

Participants in this Docket have proposed a variety of delivery mechanisms for non-market-based energy efficiency programs. They include utilizing the distribution utility, utilizing a non-profit consumer based entity, bidding out programs to energy service companies, and delegating responsibility to the Department of Public Service. We conclude that a hybrid of the participants' proposals will best serve the public interest in an efficient and effective manner.

We propose the creation of one or more "efficiency utilities" to oversee the development and implementation of statewide benefits programs. Like other retail utilities and new energy service marketers, these entities will be certified or chartered by the Public Service Board.[118] We envision that an efficiency utility will be able to solicit and review bids for cost-effective energy efficiency programs and fund these programs with revenues from the systems benefits charge described above. Bids may come from a variety of organizations that may include private energy service companies, one or more "Consumerco" entities, or distribution utilities.[119] In particular, these efficiency utilities should focus on proposals that seek to

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116. To date, California, Massachusetts, and Rhode Island have adopted or are considering settlements that would establish pre-set energy efficiency expenditures.

117. We propose a floor for the SBC through 2001 of 3 mills per kWh.

118. As the recipient and administrator of the System Benefit Charges, the efficiency utility we envision would be a non-profit corporation chartered by the Board to supervise energy efficiency programs after competitive solicitations.

119. To the extent that distribution utilities with affiliate retail service companies apply for efficiency program funding, additional competitive assurances may be needed to ensure that the Disco efficiency program activities do not confer any special competitive advantage on their competitive, retailing affiliate. Similarly, retailco program delivery may raise potential concerns for use of SBC-funded program activities to leverage certain marketing activities for a competitive advantage.

overcome specific market barriers to energy efficiency measures with the goal of transforming statewide benefits programs to market-delivered programs. Competition among would-be providers of efficiency services will ensure development of the most cost-effective programs.

We see a strong role for the Department of Public Service in the energy efficiency aspects of a restructured industry, in many ways similar to the planning, advocacy, and evaluation roles that it provides today. The DPS would continue its planning role of determining the amount of cost-effective, statewide energy efficiency resources available through the development of statewide avoided costs. The DPS would continue to evaluate the effectiveness of statewide benefits programs after they are implemented and make recommendations for action to the Board and to the efficiency utilities. The DPS would advise the energy efficiency utilities in a manner similar to its current role in Board integrated resource plan (IRP) proceedings We conclude that the DPS can better serve the interests of ratepayers and the state of Vermont by continuing its advocacy for the optimal design and delivery of energy efficiency programs than if its role is expanded to include the bidding out or actual implementation of such programs. We also encourage participants to consider what implementation details need to be addressed prior to the start of the transition period.

F. Transition Issues

In anticipation of the start of the transition to a more competitive regulatory structure, we propose that the DPS evaluate the potential for energy efficiency resources to be acquired through the mechanisms described above. The DPS should identify the extent to which current energy efficiency programs can be shifted to Discos, market-based or code-based programs, or statewide energy efficiency programs. The DPS should file its estimates by March 31, 1997. After an opportunity for comments from other restructuring participants, we will hold hearings to determine a transition plan and an initial baseline for the system benefits charge. We anticipate concluding those hearings and issuing a final order before January 1, 1998.[120]

We will also open an investigation in May, 1997, into the appropriate structures necessary for planning and implementing statewide benefits programs. Although we intend to

120. We encourage the Department to consider the potential lost opportunities associated with a rapid phase-down of current program activities and initiatives. A reasonable phase-down and phase-in period for cost-effective distribution utility programs during the transition period is encouraged.

focus initially on the concept of an efficiency utility, as outlined above, we will consider alternative approaches proposed by participants.[121]

Regulated electric utilities have an ongoing obligation to continue to implement their integrated resource planning under current statutes and Board Orders.[122] The planning horizon for evaluating the cost-effectiveness of traditional supply and energy efficiency resources will require a balancing of short-term and long-term utility and public policy concerns. At this time, we do not adopt any specific methodological approach for addressing those concerns. We encourage all the participants in the IRP process to consider flexible approaches that preserve Vermont's historic commitment to cost-effective energy efficiency programs, continue to secure savings for customers, and adequately reflect the many uncertainties that regulated utilities must face today, and in the near future.

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121. In view of recent market changes, we may proceed to certify one or more efficiency utilities, even in the absence of comprehensive restructuring legislation. As with the implementation of Federal PURPA statutes, a statewide efficiency utility is an entity that the Board can initiate through existing rulemaking authority. See 30 V.S.A. §§ 209(a)8 and 209(d).

122. See 30 V.S.A. § 218c and Docket 5270, Order of 4/16/91.

X. PROMOTING RENEWABLE ENERGY

A. Goals

Throughout this investigation, the Board has expressed our strong support of the positions expressed in the Vermont Principles: a restructured industry must, at a minimum, maintain the current efforts that promote the use, development, research, and commercialization of renewable energy resources.[123] This principle was also endorsed by the Negotiating Group Subcommittee on Energy Efficiency and Renewables. Since 1980, Vermont has installed over 100 MW of in-state renewable resources, an amount that (after accounting for efficiency and load management measures) exceeds the growth in the state's peak demand during that period. Most recently, we approved a six-megawatt wind project that will provide both competitively-priced energy and valuable research information on the potential for future wind development in Vermont and New England. These capacity additions, mostly small in scale, provide a number of key public benefits, including:

- *Resource Diversity:* A generation portfolio made up of plants of varying sizes and technologies, dispersed throughout the state or region, bears lower risks associated with unplanned outages and high required reserve margins. This reduced risk equates to lower costs of power in the long run.

- *Reduced Fuel-Price Risk:* Perhaps the primary risk offset by the development of renewable resources is fossil-fuel price volatility. At a time when this nation is dependent upon foreign markets for more than half of our demand for oil, renewables offer a great measure of energy security and price stability.

- *Environmental Protection:* For the most part, renewables provide significant environmental benefits, largely in the form of reduced emissions of airborne pollutants.

- *Sustainability:* Renewable technologies do not rely upon depletable resources. As such, they do not decrease the stock of "natural capital" passed on from one generation to the next; nor are they as susceptible as fossil fuels to price increases resulting from eventual scarcity.

It is essential that these benefits be preserved and promoted in a restructured industry that may value short-term energy prices without consideration of either long-term price stability or unpriced environmental damage.[124] Public policies and programs in support of

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123. See *Vermont Principles on Electric Industry Restructuring*, Appendix E; EER, 3/25/96.

124. This failure of the short-term market price to accurately reflect all costs associated with the purchase of electricity presents a potential difficulty for institutional and corporate business managers, who may be concerned that, if they purchase any electricity product other than the lowest-priced, they could be accused of failing in their fiduciary duties.

renewable energy are necessary to overcome these market failures, and they should be designed with the additional objective of long-term market transformation in mind.[125]

We have identified four categories of renewable resource activities that will serve these objectives as part of our plan for the transition to more competitive retail electric markets. A restructured industry should (1) maintain the current contribution that renewable resources make to Vermont's energy mix, (2) encourage the installation of renewable resources that are close to commercialization, (3) assist the move to commercialization of promising renewable resource technologies, and (4) contribute to research and development efforts to identify future renewable technologies. We discuss, below, the mechanisms that appear most likely to accomplish these goals.

B. Portfolio Requirement with Tradeable Credits

While most of the participants supported the concept of sustaining current levels of renewable resources and incorporating soon-to-be commercialized technologies, there was significant disagreement over the appropriate mechanism that would most effectively and efficiently achieve that result. Among the options identified were: federal legislation; EPA or DOE regulations; a non-bypassable, non-discriminatory wires charge; and a portfolio requirement.[126] We conclude, based on the filings we have reviewed to date, that a portfolio requirement, or renewables portfolio standard ("RPS"), is best suited to accomplish this key public policy objective.

We envision a two-part portfolio requirement that all sellers of energy for end-use consumption in Vermont would be required to meet. The first part would be a percentage of

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Consequently, it should be the unequivocal policy of the state that it is not a violation of a fiduciary responsibility to responsibly purchase renewable energy (or energy efficiency services) even at higher nominal prices than energy from traditional generation sources. We recommend that the legislature establish this policy through appropriate legislation.

125. This is an important aspect of a renewables policy: the recognition that they provide unpriced, or undervalued, benefits that conventional technologies do not. Capturing those benefits justifies the policy of support. Moreover, if designed appropriately, the policy will spur the development of renewables in a way that will lower their costs, thereby enabling them to compete in the open market without support. The growth of new energy industries should have positive economic benefits for the state and the nation.

126. See, generally, participants' filings of 3/25/96 and 6/19/96.

generation requirement for existing, commercialized renewable resource technologies. The renewables that would qualify for meeting this requirement would be small-scale, sustainable facilities, including landfill methane, biomass, wind, and possibly, small-scale hydro.[127] We make no final determination at this time on the specific definition of renewable resources and envision future proceedings to examine this issue.

The second part of the portfolio requirement would be a percentage requirement for renewable resources that are very close to commercialization — for instance, photovoltaics and fuel cells. This percentage requirement would be much lower than the one for commercialized resources.[128] By requiring all end-use sellers to satisfy this second tier of the RPS, we hope not only to capture some of the underpriced benefits of renewable energy in the total mix of Vermont energy resources, but also to give some additional impetus to the development of promising technologies.[129]

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127. Whether any particular renewable technology requires support in order to compete in the open market is fact-dependent. It is the intent of our proposed policy to maintain and increase over time the contribution of renewable energy to the state's electric generation portfolio. That does not necessarily mean that *existing* projects will qualify for inclusion in the portfolio; this will depend on whether and how the project meets the eligibility requirements. It may also depend on how any potentially stranded costs associated with existing projects are dealt with.

We have also concluded that large-scale hydro need not be included in an RPS. (For purposes of this discussion, large-scale refers to facilities larger than 80 MW.) While it may very well provide the fuel-risk, emissions, and diversity benefits of other renewables, it very likely does not require market transformation support. In any event, large hydro's air quality benefits will be recognized through the emissions portfolio standard that we are proposing. See Section XI.

128. The DPS has recommended a portfolio goal of four percent for newly commercialized resources by the year 2007. DPS, 3/26/96 at 60-62. Also, this component of the RPS would be limited to projects that begin construction on or after the date of the beginning of the transition to competition. DPS, 11/20/96 at 29. While we do not endorse the specific details or percentage of the DPS's proposal at this time, we anticipate developing criteria similar to those in the DPS's plan.

129. We note also that dividing the RPS into sub-parts is not the only way of targeting specific technologies within the portfolio standard. Assigning different values to the output of certain projects (for instance, doubling the number of credits per kWh) may serve these objectives equally as well. This

Every retail seller would not be required to actually produce or purchase the required renewable energy resources to satisfy Vermont's portfolio requirement; a seller's obligation could be met through the purchase of credits associated with the sale of renewable resources to Vermont end-use customers by other retailers.[130] For purposes of illustration, if Vermont's renewable portfolio requirement were 25 percent, a retailer with 100 percent renewables sales to Vermont customers could sell his excess credits — those associated with 75 percent of his sales — to other retailers who may be producing or purchasing less than 25 percent from renewable resources for sale into Vermont. We anticipate that a secondary market for credits will develop as part of this approach, which builds on the successful national experience with the marketing of sulfur dioxide (SO_2) allowances under the federal Clean Air Act. As with the SO_2 program, we believe that an RPS with tradeable credits may deliver renewables in a very cost-effective — and market-based — fashion. We invite participants' comments on the administrative issues that will need to be addressed in order to implement this program.

As part of their certification to provide energy services in Vermont, retail companies would have to provide periodic documentation that they were meeting the renewable portfolio requirement. A single program administrator would be responsible for certifying that the percentage requirement is met, as well as advising retailers of any changes in the specific percentages required.[131]

C. Wires Charge for Research and Development of Renewables

While most participants in this Docket agreed that support for the commercialization of promising renewable technologies and continuing research and development efforts to identify new renewable resources are important public policy objectives, there was no consensus on how Vermont could or should contribute towards the achievement of these objectives. The concern expressed by many was that traditional funding for such efforts, mainly through expenditures of vertically integrated utility associations (*e.g.*, the national Electric Power

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question should be taken up in the design phase of the RPS.

130. Eligible resources would be limited to those that have a contract path into Vermont.

131. We welcome comments from the participants on the best mechanism for establishing and revising the appropriate percentages and the types of production that would be eligible for credits in each category. At this time, we envision a process that involves a filed recommendation by the DPS, an opportunity for retailers and others to comment, and a final determination by this Board.

Research Institute—EPRI), would not be sustainable in a more competitive, disaggregated market.

Vermont benefits from these research activities to the extent that the quality of life in Vermont is improved through the development of sustainable, less-polluting energy resources. As discussed more fully in the following section on the environment, Vermont is particularly vulnerable to the energy choices made in distant locations that result in the expanded use of coal-fired generation. Vermont's land, waters, air, and ultimately our health are directly affected by upwind fossil-fuel generation. Despite the importance of this issue, we are concerned that Vermont, on its own, can do very little towards advancing essential research activities on renewable technologies. We propose two ways to address this situation.

First, and preferable from our point of view, is a non-bypassable *national* wires charge that would generate sufficient revenues to fund meaningful commercialization and research and development activities. This would require federal legislation and administration through DOE or FERC. While we are not aware of any current efforts to promote this approach, we believe it deserves serious consideration as part of the national debate that has begun in Congress regarding electric industry restructuring.[132]

Second, we would consider the creation of a Vermont wires charge to support commercialization and research and development of renewable resources once a significant number of other states confirmed their willingness to make similar commitments. We would be willing to designate those revenues to a regional or national fund, subject to public oversight by the contributing states. This mechanism would be triggered only when the number of other states so committing represented a sufficient resource base to make such a fund worthwhile.

D. Commerce Clause and Federal Preemption

We note that several participants raised concerns that a portfolio standard may represent an undue burden on interstate commerce and be subject to judicial nullification. At this time, we are not persuaded that a properly constructed, non-discriminatory portfolio requirement would be found to violate current Supreme Court Commerce Clause decisions.

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132. At a U.S. Senate hearing in Burlington in September of this year, Senators Jeffords (VT) and Bingaman (NM) asked what issues might be appropriate for Federal legislation. Hearings of Senate Subcommittee on Energy Production and Regulation, Committee on Energy and Natural Resources, at Burlington, VT, September 9, 1996. We believe that this issue is one that deserves Congressional attention.

We have also considered whether Federal legislation preempts state efforts to establish either portfolio requirements or wires charges to promote the use of renewable resources. While Congress could pass legislation that would effectively prevent individual states from pursuing their own approaches, we see nothing in current Federal law that would invalidate any of the mechanisms that we are proposing.

XI. PROMOTING ENVIRONMENTAL QUALITY

Because the production of electricity imposes significant environmental impacts, Vermont and the nation must carefully consider the environmental implications of lessened economic regulation of electric generation. Can nationwide restructuring proceed without undermining the achievement of national and state goals for environmental improvement? The consumer benefits driving the move to increased competition will be bought at too high a price if a restructured industry is unable to assure a reasonably healthy environment in a cost-effective manner.

Electricity generation plays a large role in many local, regional, national and international environmental issues, including global warming, acid rain, ground-level ozone, air toxics, land use and water impacts.[133] Pollution emitted by fossil-fuel-fired plants is the primary cause of acid deposition and also contributes to the high mercury levels in the Northeast's rivers, streams, and lakes.[134] Power plant emissions are also responsible for approximately one-third of the nation's anthropogenic carbon dioxide emissions, a key factor in global climate change. Given the continuing summertime recurrence of unhealthy ozone levels in many parts of New England, the damage to our ecosystems and health from acid rain and air toxics deposition, and the global impacts on climate change, it is critical that the regulatory framework for a restructured utility industry address the environmental effects created by the generation of electric power.

The New England states continue to experience regional and inter-regional consequences of midwest power plant emissions, and these utility-related emissions are likely to increase.[135] For example, a recent Forbes magazine article on coal prices quotes an industry executive who estimates that the coal industry could sell up to 250 million more tons a year, over 1995's 816 million tons, if utilities increase their production from under-utilized coal-burning facilities in a more competitive electric industry.[136]

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133. In 1993, electric power plants were responsible for 72 percent of all sulfur dioxide (SO_2) emissions, 33 percent of all nitrogen oxides (NO_X) emissions, 32 percent of all emissions of particulate matter, 23 percent of mercury emissions, and 36 percent of all anthropogenic carbon dioxide (CO_2) emissions. U.S. Environmental Protection Agency, *National Air Pollutant Emission Trends* 1900-1993, Washington DC, 1994.

134. While appearing only as trace amounts in soil, the atmosphere, and in regional water bodies, hundreds of tons per year of air toxics, such as arsenic, chromium, lead, mercury, and selenium, are produced and emitted by electricity generators.

135. See Statement of Jay Hakes, Administrator, Department of Energy, Energy Information Administration to the U.S. Senate Committee on Energy and Natural Resources, Burlington, Vermont, September 9, 1996.

136. "Coal on the Internet," Toni Mack, Forbes Vol. 158, No. 6 September 9, 1996.

A. Applying Existing Air Pollution Law

In spite of unsuccessful attempts by downwind states to use provisions of the Clean Air Act ("CAA" or "Act") to confront upwind emission sources, it is worth considering how existing CAA provisions could be used to control upwind air emissions. CAA provisions concerning state implementation plans and interstate pollution abatement are both available to Vermont for confronting upwind polluters.[137]

Since the late 1980s, when many of the long range transport lawsuits brought by Northeastern states relied upon these sections of the Act, there have been a number of changes in the national air program that could affect the outcomes of similar suits were they brought today. First, air pollution modeling has become more capable of demonstrating interstate impacts of upwind pollution.[138] This was not the case ten years ago. Since then, the Ozone Transport Assessment Group (OTAG) process[139] has developed a substantial amount of information which provides greater understanding of interstate pollution and meteorology. This, in addition to air deposition data gathered in Vermont, could provide a significant factual basis for demonstrating the effects on Vermont of interstate air pollution.

In the future, there may also be an interest on the part of the EPA to order revision of upwind states' State Implementation Plans, and to support plaintiff downwind states who are suffering from the pollution created by their upwind neighbors.[140] With EPA support, the legal impediments faced in the past by plaintiff states could be partly overcome and replaced by the deference that reviewing courts afford an expert administrative agency such as the EPA. Thus, the Act may well provide viable remedies in the context of long range air transport.

B. Pending Air Pollution Programs

In addition to those existing provisions mentioned above, the Act envisions updating programs with new and more stringent air pollution controls. These new provisions should

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137. CAA sections 110 and 126. The state of Vermont is taking part in a lawsuit against the EPA (*State of New York v. U.S. EPA*, Docket 96-1714 (7th Cir.)) to get that agency to enforce the provisions of Sections 110 and 126 of the Clean Air Act. This lawsuit challenges exemptions from nitrogen oxide emission limitations which EPA granted to certain midwestern states on the grounds that such exemptions will allow these states to continue to contribute air pollution problems in downwind states in violation of the Clean Air Act.

138. See testimony of R. Poirot, Air Quality Planner, Air Pollution Control Division, Vermont Agency of Natural Resources, on behalf of the Department of Public Service, regarding the Ozone Transport Assessment Group process: "It certainly will develop and has already developed some useful data, has moved the science to a place where denial of ozone transport is no longer an option, and its just a question of what to do about it and what sources to control by how much." July 17, 1996 at 137.

139. This process developed under section 184 of the Clean Air Act to organize all 37 states east of the Rocky Mountains to attempt to reach consensus on strategies to reduce transported ozone precursors like NO_X. Vermont has been active in the Ozone Transport Commission for the Northeast Ozone Transport Region, as well as in OTAG.

140. *State of New York v. U.S. EPA*, Docket 96-1714 (7th Cir.). See note 137 above.

impose further controls on electric industry emissions. They include: (1) more stringent ozone and particulate rules; (2) a Phase II visibility program with a regional haze component; and finally (3) a potential greenhouse gas control program which may impose mandatory controls that go well beyond the current voluntary program.

C. The Board's Proposed Five-Part Program

The Board remains hopeful that existing and new CAA provisions will prove effective in confronting and controlling Vermont's long-range air transport problem. Although the Clean Air Act has made great strides in a number of different areas, it appears to be unable to sufficiently protect Vermont's environment from upwind utility emissions. Neither the EPA nor FERC have been able to stop the existing long-range air transport of air contaminants, nor is there any assurance from either of these agencies that with a restructured electric industry, things will be any different. Vermont and the rest of the Northeast, therefore, remain in the unenviable position of receiving the environmental burdens of emissions generated beyond our borders.

Because the sources of this pollution are located beyond Vermont's borders, the solutions we seek are not entirely those that Vermont, as an individual state, can provide. Thus, in order to assure not only continued but also improved environmental protection with a restructured industry, the Board believes that aggressive effort is required not only within its traditional realm of authority, but also through coordinated efforts with other Vermont government agencies, other Northeast states, and with the federal government.

The Board proposes to address the environmental issues outlined above through the implementation of a five-part program. In general terms, we seek to coordinate stakeholders in this effort and to assure that the protection and continued improvement of Vermont's environmental quality are built into the process of restructuring Vermont's electric industry.

Part one of the plan will require retail sellers of electricity in Vermont to disclose information concerning their generation mix. This requirement seeks to provide consumers with information on generation types and impacts associated with various companies' retail products. This disclosure will allow consumers to make more informed decisions about their power purchases, and to support environmentally responsible electricity sources. See Section XI.C.1 below for a further discussion of the information disclosure requirement.

Parts two and three of the Board's plan, respectively, establish a percentage requirement for renewable resources in retailers' generation portfolios, and exclude from generation portfolios any generation source not subject to modern, generally-applicable environmental controls. Both requirements are intended to promote the purchase of electricity generated by technology that is, at least relatively, environmentally benign. The "Renewables

Portfolio Standard" has previously been discussed in Section X. The "Emissions Portfolio Standard" is described below, in part XI.C.2 of this section.

As part four of its plan, the Board supports the formation of a robust competitive market for energy efficiency services, together with a statewide efficiency utility to break down remaining market barriers. By assuring the continuation of energy efficiency activities, the Board's proposal will help reduce emissions from in-state and out-of-state generation facilities by reducing overall demand for electricity. The Board's energy efficiency proposals have been set forth in Section IX, above.

As part five of its proposal, the Board supports federal efforts designed to promote additional environmental protections at the regional and national levels. In general, we will seek legislation that will assure environmental comparability among all participants in national electricity markets. The Board is not wed to any single mechanism to accomplish this end, but supports three approaches: (1) environmental comparability (sometimes called "old source review"); (2) the use of a market-based "cap and trade" program for dealing with pollution from new or old sources; and (3) an amendment to the Federal Power Act to make it clear that FERC has both the authority and the responsibility to consider the environmental impacts of broad industry restructuring decisions. The Board's proposals for federal efforts are found in part XI.C.3 of this section.

1. Information Disclosure for Electric Sales

Under the plan for customer choice that we set forth in this Report and Order, approximately 300,000 Vermont electricity customers will soon begin choosing their electricity providers in a competitive environment. Electric industry restructuring provides an ideal opportunity for electricity customers to exercise meaningful choice over their future sources of electricity. Making informed choices, however, depends on having relevant information available in a form that enables easy comparison. Therefore, the Board proposes a "labeling" or information disclosure requirement as part of Retailco certification. It will require Retailcos to disclose information regarding the types of sources of the electricity that they are selling in Vermont, and the environmental impacts associated with that generation.

Information can be provided in a standard format to allow easy comparison among service offerings. First, Retailcos will be required to disclose the types of generation sources contained in the portfolio that they are selling in Vermont. For example, the disclosure would contain a list of generating technologies and fuel sources and their respective percentages in the Retailco's portfolio (*e.g.*, *X* percent nuclear, *Y* percent oil, etc.) Second, in addition to providing customers information on the type of generation they are purchasing, Retailcos would be required to disclose the environmental effects of those generation sources. They will

have to disclose the amounts of emissions created by their overall portfolio (*e.g.*, *X* percent over or under the national average of a particular group of pollutants).[141]

Because one objective of electric industry restructuring is increasing customer choice, a labeling requirement will allow consumers, for the first time, to choose on a basis other than just direct price. Customers' preferences will, in turn, influence the mix of generating resources that supply power to Vermont customers. Customers will be able to make a choice, for example, to buy only power generated by renewables.[142] Or, they may choose to purchase natural gas generation in preference to more polluting coal or oil options.

In addition to providing customers with basic information about the Retailco's resource mix and environmental characteristics, Vermont's customers' right-to-know requirement could be used by companies as a basis for offering special products. For example, those companies that plan to market "green" energy products will be able to use the disclosure format as a basis for a comparison of their products with other Retailco offerings.[143]

Associated with the green power concept is that of the green aggregator, a company that will bundle individual consumers' load for green power into a larger block of demand which could be supplied a more competitive price. Customers who choose to buy power generated through renewable technologies could do so by buying through bilateral contracts with green aggregators. Both the opportunity for purchasing green energy products and the availability of green aggregation will be based upon sufficient consumer preference for renewable energy. Green energy and its aggregation could play a large role in the promotion of renewable energy availability in Vermont. They also complement the renewables portfolio standard, and thereby further promote the environmental goals of this five-part program.

2. An Emissions Portfolio Standard

The air pollution implications for Vermont of increased competition in electricity markets depend largely on how sellers and buyers respond to the many opportunities that will

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141. *E.g.*, criteria pollutants, or air toxics.

142. If this type of power is more expensive than conventional sources of electricity, retailers will have to charge higher prices than they would for electricity generated from a more conventional source. However, the relative cost of renewable and low-emissions resources will be reduced through teir receipt of tradeable renewables and emissions credits under our proposed portfolio standards programs.

143. Since many consumers place substantial value on the environmental characteristics of power sources, generation disclosure requirements will also add value to renewable and low-emissions resources.

be developed in this more open industry structure. Even in the absence of retail competition, many observers predict that greater access to the national transmission grid will provide those generators with excess capacity with a larger market than they previously had. Emissions from these generators, therefore, are expected to rise, while emissions from higher-cost generation in purchasing regions could fall. Moreover, lower prices due to competition could increase electricity usage, leading to greater emissions from electricity generation. On the other hand, other experts believe that competition will result in greater investment in lower-cost and relatively clean combined cycle gas combustion units. This could result in a decline in electricity emissions in the aggregate and in the long term.

We do not need a crystal ball to resolve this debate. Regardless of industry supply and demand dynamics, for years Vermont has experienced, and continues to experience, the effects of long-range transport from upwind generation. As this Report is being written, sources upwind of Vermont deposit heavy metals in our lakes, disperse fine particulates throughout our airshed, and promote the acidification of Vermont's forests and waterways.[144] The movement to competition affords us the opportunity to lessen the environmental impacts of Vermont's electricity consumption, regardless of the underlying market dynamics. The means of accomplishing this goal in a least-cost, market-based manner are set out below.

a. The Standard

The Public Service Board adopts the proposal of the Department of Public Service and Agency of Natural Resources to include an emissions portfolio standard ("EPS") in the Retailco certification process. The purpose of the EPS is to assure that Vermont electricity consumption does not contribute to an increase in demand for the type of high-polluting power generation that is currently affecting this state. The emissions portfolio standard would require each retailer[145] to configure the generation portfolio from which it sells into Vermont to meet a Vermont-based environmental profile. At a minimum, we propose that the total emissions associated with electricity sales into Vermont in 1996 will not be exceeded in any future year. Further review of the issue is necessary in order to properly set a standard. However, on principle, the Board is committed to including an emissions portfolio standard with the other certification standards described in Section V.

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144. Many upwind emission sources located in the Midwest are not currently required by EPA or their state environmental enforcement agencies to implement controls that would help mitigate their direct impact on Vermont.

145. As with the renewables standard, the emissions standard applies to every Retailco or Genco selling to end-users in Vermont.

An EPS could be met by either excluding certain types of undesirable generation or by including only a percentage of such generation types in the portfolio.[146] The Massachusetts restructuring settlement, for example, adopts the concept of an emissions portfolio standard, in the nature of an efficiency standard expressed in terms of pollution per unit of electrical output (lb/MWh).

The EPS might be set by establishing an emission cap for pollutants (*e.g.*, NO_X and SO_2) and dividing by the total fossil and renewable generation within a region. Each utility selling in-state would be required to achieve an average system/portfolio emission rate consistent with the standard. Utilities operating below the standard generate credits; those that exceed the standard would need to purchase credits from the market.

There are a number of details associated with the EPS which need to be addressed. Because these details—*e.g.*, the precise settings of an EPS, its relationship to Vermont's State Implementation Plan, potential commerce clause and preemption issues, and its relationship to the proposed renewables portfolio standard—are in need of further development, the Board will convene a Restructuring Environmental Workgroup to address these implementation issues. The group should include representatives from the Board, the Department of Public Service, the Agency of Natural Resources, utilities, environmental organizations, and customer groups. The Board expects to implement an emissions portfolio standard along with other certification requirements for retailers before customer choice begins in 1998.

3. Support for Federal Legislation

In addition to the efforts that Vermont must make to assure that its restructuring of the electric industry results in a cleaner and safer environment for all Vermonters, we support federal legislation that promotes similar policies.

Congress can help Vermont and other states make the transition to a competitive electric generation market by removing some of the obstacles to truly competitive regional electricity markets, and also by creating regional solutions to multi-state environmental problems. There are a number of significant and complex issues that can most effectively be addressed through multi-state or regional action, especially where the states may face claims by FERC of no jurisdiction or where they risk Commerce Clause violations by trying to address

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146. A standard based upon the Clean Air Act's control standards, such as New Source Performance Standards or Best Available Control Technology, is a possibility. Such a standard would effectively exclude exempted generation sources that have been grandfathered from Clean Air Act controls. It would thus provide "old source review" for sources whose electricity would otherwise be available for sale into Vermont.

regional and national issues by themselves. A failure to craft effective solutions to these multi-state barriers to competition will only delay, and perhaps seriously compromise, the significant consumer benefits that restructuring can offer.

a. Environmental Comparability

The CAA was premised on the assumption that generators would be owned and operated by franchised utilities, and that "old sources" grandfathered under the Act would eventually be replaced by those utilities, with resulting costs recovered through regulated rates. However, many of the older generating facilities exempted from the 1970 CAA requirements are still in operation today:[147] they emit at high rates, utilize minimal emission control technologies, and thus can produce power more cheaply than newer plants with modern pollution controls.

Simply put, an environmental comparability standard would assure that grandfathered plants are subject to the same pollution controls required of all other similar sources.[148] This approach will call into question the economic viability of grandfathered plants, and will also increase the likelihood that they will be replaced by newer, cleaner, and more efficient generating capability. By bringing these plants into compliance with regulations that their competitors face, Congress can help remove the current system's bias in favor of outdated and heavily polluting technology, provide the grounds for fair competition among generators, and open the door to more efficient and cleaner generating technology.

Many of these grandfathered power plants are currently under-utilized. In a competitive market where demand increases, these older plants will enjoy an artificial competitive advantage over plants that must comply with current emission requirements. As a result, the grandfathered plants will be called upon to generate more power and, unfortunately, more pollutants. Congress can promote fair competition and reduce this barrier to technological innovation by eliminating this artificial economic advantage. In this way, Congress can better assure the benefits of a competitive market to all participants.

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147. There are roughly 183 gigawatts of coal capacity from generators operating prior to 1971, the year that New Source Performance Standards first applied to new generators. Tellus Institute, *Promoting Environmental Quality In A Restructured Electric Industry*, 12/15/95 at 14-15. To put this figure in perspective, by comparison, Vermont's entire peak load is less than one gigawatt.

148. Tr. 7/17/96 at 21 (Brick). Two states, Rhode Island and Massachusetts, have included "Old Source Review" as part of the environmental component in their restructuring plans.

b. Cap and Trade

It would be a missed opportunity to restructure an entire industry and to not assure that effective pollution control and the protection of public health is not achieved through the most efficient means available. Therefore, a second legislative approach that Congress could pursue is a market-based "cap and trade" system. It is flexible and addresses both economic and environmental concerns.

A cap and trade system, similar to the current sulfur dioxide emissions program under the CAA, would allow for the trading of emission credits both within regions and between regions.[149] Under this approach, applicable thresholds and environmental standards would be established in conjunction with open access rules, and would complement existing federal and state air pollution control programs. These rules could be administered by regions, power pools, or newly created independent system operators with enhanced responsibilities.[150]

Such mechanisms could lower compliance costs and alleviate the unfair advantage that upwind generators have over downwind generators whose emissions, and thus generating capabilities, are curtailed due to existing downwind air quality problems. This approach is also complementary to existing State and federal air pollution control programs. Keeping in step with national policies, the development of comparable market-based environmental standards in conjunction with open access rules would promote the overall purpose of the Federal Power Act and help develop a non-discriminatory and efficient open power market for all regions of the country.

c. General Environmental Mandate

A third legislative approach that we recommend is that Congress consider an amendment of the Federal Power Act to make it clear that FERC has both the authority and the responsibility to consider the environmental impacts of its broad industry restructuring decisions. An explicit environmental comparability mandate could bridge and harmonize

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149. Congress should continue to encourage states' or groups of states' efforts to employ pool-wide or region-wide approaches to mitigation of the environmental impacts of restructuring. In this regard, Congress might consider the modification of existing regional mechanisms or models such as the Interstate Transport Commissions CAA § 176A, 42 U.S.C.A. 7506(a), the Ozone Transport Commission CAA § 184, 42 U.S.C. 7511c(a), the Visibility Transport Commission CAA § 169b(c), 42 U.S.C.A. § 7492c, and the use of Joint Boards, 16 U.S.C.A. § 824h.

150. One example of such a proposal is the "NO_X emissions neutrality" program that was proposed by the Center for Clean Air Policy. This mechanism would apply to all sales for resale upwind of the Ozone Transport Region (OTR), and would provide for emissions offsets equal to the increase in emissions—over and above the equivalent OTR emissions—related to such power sales.

existing regional environmental differences as well as apparent jurisdictional overlaps between sister agencies.

d. Other Environmental Impacts

Since we issued our Draft Report and Order on October 16, 1996, the Water Resources Board (WRB) has issued a ruling regarding water quality certification for four CVPS hydroelectric projects.[151] The WRB decision has brought to the forefront issues regarding the appropriate balancing of the costs and benefits of in-state hydroelectric generation. We understand that representatives of the WRB have been meeting with representatives of other governmental agencies and interest groups to discuss these and related issues. We support this initiative.

Significant environmental consequences, including water quality and land use impacts, can accompany the various technologies for electricity generation. We strongly support the protection and enhancement of the quality of Vermont's aquatic and land resources as well as its air quality. Restructuring presents an opportunity to improve environmental quality, a goal which is not limited to air resources; we believe that our Plan capitalizes on this opportunity.

Some participants have commented that under the Board's Plan, there could be an erosion of the environmental protection currently provided under 30 V.S.A. § 248. We do not share this conclusion; in fact, the restructuring Plan, which includes a comprehensive emissions portfolio standard, should actually *increase* Vermont's ability to control the environmental impacts of our electricity consumption. First, under our Plan, Section 248 review will continue for physical construction of generation and transmission facilities in Vermont. Second, under existing law, our environmental review of out-of-state power purchases has, in fact, been quite limited. Most power purchases from out of state do not require approval under Section 248 because they are limited in duration or scope; for those that do trigger Section 248 review, our review of the environmental impacts is limited to impacts that affect Vermont.[152] Third, we expect the proposals advanced here to lessen the

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151. *In re: Lamoille River Hydroelectric Project*, Docket Nos. WQ-94-03 and WQ-94-05, Vt. W.R.B. (Nov. 5, 1996). The water quality certification is required by Section 401 of the Federal Water Pollution Control Act, 33 U.S.C. §§ 1251 *et seq.* (also known as the Clean Water Act).

152. The Board relied upon the *general good of the state* standard set out in § 248(a) in our review of the extraterritorial environmental effects (in particular, air pollution impacts) associated with power purchases from Hydro-Quebec in Docket 5330. That review was described by the Board as "pragmatic" and it implied a balancing of issues: "We obviously

environmental impacts of electricity that are delivered to Vermont: customer choice, generation and emissions disclosure, the emissions and renewables portfolio standards, and energy efficiency programs will provide a comprehensive, market-based approach to improving environmental quality.

Vermont's environmental policy, as it helps shape electric industry restructuring, must promote the long-term, as well as the short-term, public good. To do this, it must ensure continued environmental responsibility, and equitable environmental protection. While we believe that much of this effort can be accomplished from within the state, regional and national coordination is also essential to the development of an equitable and efficient system.

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cannot conduct a detailed Section 248 permit review for every facility that may be operated or constructed by Vermont's many out-of-state suppliers of electricity. . . . At the same time, we cannot simply ignore the broad environmental impacts of our energy supply decisions just because the facilities are located outside of Vermont, especially when those impacts affect the general good of the state." Docket 5330 Order of 9/21/89 at 3.

XII. Ensuring Effective Regional and National Markets

A. Establishing Effective Regional Markets and Institutions

Industry restructuring requires both the evolution of existing regional power entities, and the creation of new entities to address emerging concerns associated with market behavior. One critical regional concern is the system by which competing generation service providers gain access to the transmission grid and operate generation services in a manner that both preserves system reliability and ensures a least-cost, functional, competitive marketplace.

1. Creating an Independent System Operator

Most participants in this investigation have underscored the need for the current New England Power Pool to evolve its transmission operations into an independent entity that is not controlled by the present or future owners of generation facilities. The current dominance of NEPOOL by existing vertically integrated generation companies (especially the larger voting interests in the pool) must change. At a minimum the governance, and financial support, and the rules under which the transmission grid operates must be independent of either existing or future generation interests.

Given the complex and technical nature of transmission system operations, there is significant potential for managers to engage in discriminatory practices that favor a select group of market participants in generation, or to manage the system for the overall benefit of generators generally, and to the detriment of end-use customers. Such manipulation will be difficult to detect through regulation, and remedies may be administratively burdensome for all concerned. *Independent* operation of the transmission system is necessary to address the majority of vertical market concerns related to bottleneck transmission services. The participants in this Docket have consistently emphasized the need for true independence of the ISO (from the owners of transmission and generation) as a critical consideration in its design. We conclude that this independence is necessary to provide a fair competitive operating environment for new market entrants as well as existing small utilities, and for customers.

NEPOOL reform efforts are underway and several draft proposals have been considered. The most recent draft of a proposed NEPOOL-ISO contract demonstrates significant progress towards empowering the ISO with the necessary authority to operate the NEPOOL system. Vermont continues to monitor that progress through the New England Conference of Public Utilities Commissioners. At this time, NEPOOL anticipates making several filings with FERC at the end of the year which will include NEPOOL reforms, regional transmission tariffs, and an ISO contract. We remain convinced that those filings must create an ISO with the authority to determine power pool and dispatch rules, operate the

system, and plan for its expansion in consideration of, but not under the control of, the interests of owners of generation.

At this time, we do not propose a precisely defined role for the ISO beyond that of ensuring reliable operation of the regional grid in a manner that is not unduly influenced by the financial interests of generation service providers. If the role and responsibilities of the ISO are interpreted narrowly and limited to operational concerns, then other institutions will be needed to assure a fair and open market that is free from competitive abuses. Additional oversight of the ISO through a regional regulatory presence is also needed.

Among the potential avenues for asserting competitive abuse *beyond* daily operation of the grid are: (1) planning and construction of transmission facilities; (2) the tariff and associated terms of service under which competitive entities may access the grid; (3) the rules under which an ISO operates the regional transmission grid, even where independence of operation is assured; and (4) the nature and responsibilities of a power exchange. The role that the ISO plays in each of these areas will, in turn, determine the need for regulatory oversight and independence of other responsible entities.

2. Establishing a Power Exchange

The Power Exchange should provide an efficient competitive market open to all generation service providers in the region in order to meet posted loads at efficient prices. The Exchange would not inhibit bilateral transactions, but would provide for the efficient exchange of power on a very short term basis (*e.g.*, hourly or half-hour purchases). In addition to functioning as a spot market for energy, it will likely also provide ancillary services for market participants and the ISO. It may also allow for the creation of new service options for consumers.[153] A power exchange with a spot market will be of particular importance to small customers by allowing them easy access to the market free of the heavy administrative burden of bilateral contract negotiations.

We favor the creation of an exchange in conjunction with the establishment of an ISO. If independent of the ISO, the power exchange should not be owned, governed or managed by parties with a financial interest in the outcome of its operations.

We see no reason for concluding that this power exchange need be granted exclusive rights to the market. Several exchanges could function within the region or across regions, so long as appropriate protections are in place to assure actual delivery by successful bidders, rather than allowing generators to bid resources to several exchanges while merely shopping for the best prices.

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153. See, for example, DPS, 3/26/96 at 26.

3. Regional Transmission Groups and Regional Tariffs

In FERC's recent Order 888, FERC continued its support for the voluntary establishment of regional transmission groups and the formation of regional tariffs.[154] FERC intends to show deference in accepting regional transmission tariffs established through an RTG to the extent that the tariffs provide non-discriminatory access and comparable pricing for all entities that seek to use the transmission grid. In addition, FERC has established other criteria for transmission service pricing and solicited comments through its Notice of Proposed Rulemaking (NOPR) on a capacity reservations tariff (CRT) system. We are aware of NEPOOL's efforts to develop appropriate tariffs for New England's transmission system. We look forward to reviewing NEPOOL's proposals once they are filed with FERC.

B. Horizontal Market Power

Horizontal market power is the ability of a dominant firm (or firms) to control production and therefore manipulate prices. It arises as a firm's market share increases in relation to the *relevant* overall market. In the electric industry, it poses a particularly thorny problem, because the relevant markets in which it can occur will vary according to variations in demand over time, competitors' access to transmission, and the availability of load management and other mechanisms to undercut the dominant firm's ability to increase prices above competitive levels.[155]

All the participants to this proceeding agree that the potential for horizontal market power to emerge in competitive generation markets is a significant problem—regional in scope—and that Vermont cannot by itself take the steps needed to alleviate it.[156] Historically, it has generally not been considered a problem because utilities have been fully cost-regulated.

1. Determinants of Market Power

While it is not necessary here to go into great detail about the many and specific potential causes of horizontal market power in the electric industry, it is worthwhile to note

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154. FERC Order 888, 4/24/96 at 640 and 644.

155. Perl at 314-315.

156. "The main danger is that deregulation will veer into a market-dominance trap, rather than march cheerfully on to effective competition. Intellectually, it is all-important for officials and experts to replace regulatory economics (controls to get "efficient" outcomes even under monopoly) with industrial-organization economics (about real competitive processes, with dynamic impacts). Only if that happens will there be a good chance for the budding competition to become really effective." Shepherd at 4.

some of the more obvious problems that must be resolved if we hope to create truly effective, competitive markets for generation. Failure to do so will mean that a great opportunity will have been lost, and with it significant benefits for consumers.

As already noted, the greater a competitor's share of total output, the greater will be its market power. If rivals make up for the restricted output using resources whose marginal costs are the same as those from which supply was restricted, then the firm restricting output will not have exercised market power, because output restriction would not have driven up price. Owning resources not used in competitive equilibrium may enhance a firm's market power if those resources become economical when market power is exercised. Market power may vary over time as demand conditions vary.[157]

Electricity markets, or sub-markets, are characterized by several critical dimensions: energy and capacity, firm and non-firm availability, peak and off-peak demand, long- and short-term, and present and future. Since electricity cannot be stored to any meaningful degree, it is appropriate in theory to consider at least 8760 separate hourly markets for short-term power within a year. Furthermore, transmission pricing appears to be in a state of flux, making it difficult to readily determine what transmission costs are. Market power is, in part, also a function of elasticity of demand: if demand is quite elastic (that is, very sensitive to changes in price), then the potential benefit from a given reduction in output will be small or nil. Lastly, the existence of relatively flat short-run supply curves and the longer-term prospect of entry are likely to constrain market prices, even in the presence of substantial concentration of ownership. All these factors are relevant to the determination of the geographic scope of a particular electricity market.[158]

It should be clear from this recitation that the essential conditions for *truly competitive* markets—homogeneity of product (substitutability), free entry (mobile factors of production), a sufficient number of competitors so that all are price-takers, and availability of relevant information to buyers and sellers—are rarely met in the electric industry. In practice, markets are considered *effectively competitive* if at least three conditions are satisfied, as follows:

(1) there are at least five reasonably-comparable competitors (tight oligopoly exists when four firms hold over 60 percent of the market or when the Herfindahl-Hirshman Index is in the range of 2000-2500; see Section XII, p. 135, below);
(2) there is an absence of single-firm dominance (dominance exists when the leading firm's market share is at or above the 40-50 percent); and
(3) there is reasonably free entry.[159]

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157. Werden at 17-18.
158. *Id.* at 17-19; Perl at 319.
159. Shepherd at 12.

It is critical, therefore, that all restructuring initiatives implement rules and mechanisms to assure that the conditions for competition can exist and be maintained.

2. Strategies for Addressing Failures of Existing Antitrust Mechanisms

The need to address potential horizontal market power problems structurally and at the start of the restructuring process is in part driven by the general concern that existing federal antitrust tools will be inadequate to the task.[160] As William Shepherd has pointed out, "U.S. antitrust policies have become a weak cure, both for dominance and tight oligopoly, and also for complex mergers of the types now arising in electricity and telecommunications."[161] Although it may not be within Vermont's power to deal fully with horizontal market power issues, it is nevertheless appropriate here to outline several of the approaches that have been suggested for combatting the problem:

(1) *Merger Policy:* The representative of small residential consumers and the International Brotherhood of Electrical Workers ("IBEW") recommend that Vermont should seek the adoption and enforcement of rigorous merger and acquisition guidelines at the federal level.[162] FERC, too, has recognized that restructuring raises new issues with respect to horizontal market power and this has prompted its decision to reconsider its policies on mergers and acquisitions.[163]

(2) *System Dispatch Rules:* It may be necessary, under certain circumstances, to place specific facilities under the control of the independent system operator, which will assure availability of the resources at times when owners have an incentive to limit production. This is not merely a question of meeting reliability requirements, but rather goes to dealing with a potential exercise of market power that is conferred upon a firm at times of very high demand or in the face of transmission constraints in discrete sub-markets. An example of this kind of ISO control would be treating identified units as "must-run" (*i.e.*, as if having a $0.00/kWh bid price).[164]

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160. CVPS, 6/19/96 at 10; GMP, 12/29/95 at 43.

161. Shepherd at 6.

162. Press, 3/22/96 at 14; IBEW at 6.

163. S&P Utilities Review, July 1996 at 20. As noted by economist William Shepherd, "[E]ven after deregulation may have occurred and succeeded, strong protections will still be needed against backsliding caused by mergers and anti-competitive actions." Shepherd at 6.

164. It goes without saying that the fundamental structure of the market—for instance, whether it is a bid-based dispatch pool or a system of bilateral contracts with ancillary spot markets, or some combination thereof—will determine in large measure the ways and degrees to which horizontal market power may exist. The potential for gaming the bidding and dispatch rules

(3) *Ceiling on Ownership of Generation Capacity:* GMP proposes that a ceiling on the amount of generation capacity that a firm can own or control (relative to the size of the relevant market) should be set.[165] This could be done, for example, by requiring owners to sell one or more generating units to firms with little or no preexisting capacity or by requiring owners to enter into long-term contracts that effectively transfer the rights to operate a unit and to sell the power that it generates.

(4) *Strengthen Transmission Interties:* By increasing transmission interconnections, it may be possible to sufficiently expand a market so as to reduce or eliminate horizontal market power.[166]

These strategies, individually and in concert, will assist states and regions in preventing the concentration of market power in the hands of one or few dominant firms. It is by no means clear that they are sufficient to the task, and we expect that, in the development of the ISO and other regional mechanisms, this question will be taken up in earnest. A few comments, however, may be worthwhile at this point.

We agree that mergers and acquisitions pose a potential and enormous threat to the efficient operation of competitive generation markets. In light of the small size of the Vermont market and local utilities within the region, it does not seem that there is much that this Board can do unilaterally to mitigate horizontal market power problems.[167] However, we will take whatever steps are possible to work with neighboring states, and to assist federal officials and legislators in developing appropriate merger and acquisition policies.

The auction approach proposed by GMP, which obviously has implications for stranded cost recovery (see Section VI, above), merits further consideration with respect to market power policy. However, we must state that we are skeptical of that element of the proposal that reserves to the utility the right to refuse to sell any or all of the assets put up for auction. This "right of first refusal" may damage the integrity of the auction and provide very little protection against potential market power abuses from entities in the state or region.

We are not confident that existing antitrust policies will allow for the timely and adequate treatment of horizontal market power in the generation sector. Relying on antitrust litigation to address horizontal market power concerns is an "after the fact" approach. We favor a proactive approach that will prevent most, if not all, of these abuses from occurring.

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is critical in this regard. See, *e.g.*, "Leveraging—The Key to the Exercise of Market Power in a Poolco," Tellus Institute, 6/25/96.

165. GMP, 12/29/95 at 44.

166. Werden at 21.

167. Not so, of course, when dealing with vertical market power concerns.

The problem is quite complex. The difficulties in detecting it and the tangle of overlapping jurisdictions suggest that the problem may best be dealt with in some coordinated way, for example, through state-federal joint boards or through other regional mechanisms. States may take individual actions (such as a cap on ownership of generation as a condition of entry) to address the problem, but it is not obvious that they will have much effect in regions where the market extends well beyond any one state's borders. Such policies seem better suited to regional application, as a condition of Pool or ISO membership.

3. Measurement

A traditional approach to measuring market power is the Herfindahl-Hirshman Index ("HHI"), which measures market concentration as the sum of squares of the market shares of all firms in a defined market.[168] The maximum HHI rating is 10,000, describing a market supplied by a single provider whose market share is necessarily 100 percent (100 * 100). A market made up of four firms with equal shares would have a rating of 2,500 (25 * 25 * 4). As noted above, an HHI of 2,000 or greater generally indicates a tight oligopoly.

In addressing the empirical question of determining market power, most of the participants in this proceeding recognized that there is no one satisfactory measure, and it was generally agreed that the HHI is of limited or perhaps no value for this purpose in electricity markets. This arises from the physical nature of the commodity and the fact that the geographic scope of the relevant market is fluid, changing rapidly with changes in demand, availability of capacity, and transmission access.[169]

No single concentration ratio can accurately characterize the overall electric market within a defined region. A preferable approach would be to simulate the operation of utilities within a region and calculate concentration ratios by examining each utility's share of output, but even this endeavor, if inadequately designed, may fail to identify all times and sub-markets in which a particular competitor may enjoy market power.[170] Still, behavior simulation appears to be a reasonable approach to the problem, and may be best managed by the ISO. Also, it may be appropriate that FERC take steps to develop market concentration or market share screening methods.[171]

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168. Perl at 312.
169. Perl at 314; see also "Leveraging—the Key to the Exercise of Market Power in a Poolco," Tellus Institute, 6/25/96, at 14-15.
170. Perl at 315; Werden at 19.
171. Werden at 21.

4. Conclusion

CVPS recommends that Vermont should not take any irreversible actions in restructuring until and unless it finds that effective regional horizontal market power protections have been developed and implemented. The Company argues that Vermont should be confident that an effective competitive wholesale market exists prior to allowing retail access.[172]

It is clear that horizontal market power is one of the greatest problems we confront as we move toward reliance on markets. It is also apparent that the problem manifests itself primarily in the wholesale market for electricity and that retail access may provide a mitigating influence on horizontal market power. However, that does not lead to the conclusion that a decision to give Vermont's retail customers direct access is unrelated to resolution of the market power problem. Here the concern is that retail access will occur simultaneously with the effective deregulation of generation (that is, the two are linked as part of an overall restructuring settlement), but that mechanisms will not have been put in place that will prevent the accumulation of market power by one or a few dominant firms. In such circumstances, retail access will do little to counterbalance the exercise of that power. It is absolutely necessary, therefore, that the market power problem be resolved in conjunction with the creation of an effective pool and priced-based bidding system in the region.

C. Regional Regulatory Oversight

A vibrant competitive market in the region will be essential to ensure that the changes contemplated by this Board and FERC are realized in lower rates to retail consumers. The region's transmission tariffs, transmission system planning, market transactions, and transmission system operation should be established and provided in an environment that is responsive to consumer concerns, yet reflect the shared priorities of consumers and policy makers in establishing an effective market. We conclude that this will best be accomplished by establishing a cooperative regional oversight body to ensure that these goals are advanced. Concerns for establishing an effective regional market are especially relevant to horizontal market power concerns.

Under current law, both states and FERC have authority to review utility mergers and acquisitions, but it is difficult to coordinate policies among these entities. Many market power problems are regional in nature and outside the apparent authority of individual states. Consistent merger policies and regional approaches to these issues could be advanced through regional performance standards adopted and enforced through a regional mechanism such as an

172. CVPS, 7/3/96 at 5; CVPS, 6/19/96 at 144.

ISO or a regional Joint Board. This regional body would have to have adequate authority to respond effectively to market concentration problems, *e.g.*, by ordering spinoffs or setting authorized caps on generation resources owned by participants in a regional market.

Under one scenario, FERC could authorize the ISO, or some other regional authority, to review conditions within a market and have authority to order certain generation resources be sold off where potential problems arise, even where a merger is not pending. Under other scenarios, the Joint Board could exert such influence directly, subject to an appeal to FERC. Under still another scenario, the Joint Board and FERC might simply coordinate policy among the states, FERC, and anti-trust agencies to promote consistent application of merger and acquisition policy and step in only where gaps arise in state authority to implement a consistent policy that provides adequate protection. Congressional authority may be required to create effective mechanisms in this area, particularly if state concerns are to be adequately addressed through regional decision-making.

D. Federal/State Jurisdiction

On April 24, 1996, FERC issued Orders 888 and 889, which establish the rules by which owners of transmission facilities must provide fair and open access to those wires by competitive wholesale providers of electricity. Directly related to those rules is the issue of state and federal jurisdiction over the grid: there remains a critical debate over where the line between state and federal authority is—or should be—drawn.

In its draft rule on open access, FERC stated that "unbundled retail transmission" is subject to FERC jurisdiction, but did *not* state just how deep or broad that jurisdiction would be. While that conclusion is subject to significant debate, the shadow that this broad assertion cast over state restructuring efforts was mitigated somewhat in the final rule, Order 888, when FERC stated:

> Although we are unable to draw the bright line for local distribution facilities that many commentators would like, we believe it is important to make two clarifications regarding local distribution in the context of retail wheeling. First, even when our technical test for local distribution facilities identifies no local distribution facilities for a specific transaction, we believe that states have authority over the *service* of delivering electric energy to end users. Second, through their jurisdiction over retail delivery services, states have authority not only to assess stranded costs but also to assess charges for stranded

> benefits, such as low-income assistance and demand-side management.[173]

With this language, FERC has responded meaningfully to concerns expressed by many states during the rulemaking process. Nevertheless, although this language seems to reserve to the states wide latitude in the pursuit of public policies that are critical to customers and the public in the several states, it remains uncertain how that discretion will be interpreted or limited in future FERC or court decisions. Congress should, at the very least, be encouraged to ensure that the Federal Power Act reflects this reservation by defining FERC's transmission jurisdiction clearly, and by stating that federal jurisdiction over the transmission of electricity does not alter state jurisdiction over generation and transmission siting, stranded costs and benefits, the generation portfolio, consumer protection, or the terms and conditions applied to retail access decisions.

In the area of jurisdiction, as with environmental management, market power, the power pool, and the ISO, it will be necessary for Vermont and Vermont utilities to advance solutions at both the regional and national levels. This work is well underway, and must continue as we seek to create workable, competitive electricity markets for the benefit of Vermont producers and consumers. This work is an essential element of our overall plan for a transition to such markets.

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173. FERC Order 888 at 436. FERC further stated that:

> even where there are no identifiable local distribution facilities, states nevertheless have jurisdiction in all circumstances over the service of delivering energy to end-users.
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> Therefore, in instances of unbundled retail wheeling that occurs as a result of a state retail access program, we will defer to recommendations by state regulatory authorities concerning where to draw the jurisdictional line under the Commission's technical test for local distribution facilities, and how to allocate costs for such facilities to be included in rates.

Id. at 436-438.

XIII. Charting a Transition to a Competitive Electric Industry

The Board's transition proposal calls for activities by utilities, regulators, advocates, and competitive retail service providers on a broad range of policy matters. We describe those activities below and group them into six broad categories. First, consumer and public involvement will be important for informed policy development and for enabling consumers to effectively participate in this potentially complex, new market. Second, certain competitive concerns that relate to established vertically integrated service providers need be addressed. Third, retail access and consumer protections must be established. Fourth, estimates of stranded costs need be established along with the related strategies for appropriate mitigation and cost recovery. Fifth, programs for addressing systems benefits including energy efficiency and renewable generation need to be created. Finally, information and reporting requirements will be needed to permit informed policy-making during the transition. Summarized below are the detailed tasks that require further development during the transition.

(1) Education/Increasing Public Awareness and Participation
- Conduct public hearings, consumer information campaigns, and surveys and focus groups;

(2) Corporate Structure/Competitive Safeguards
- Establish details of structural separation for the largest investor-owned utilities;
- Establish codes of conduct, rules for information exchange (including privacy concerns) for distribution companies, and other protections against competitive abuses arising from vertical market power issues;
- Establish tariff and service requirements/obligations of distribution companies to provide open access to distribution services for all upstream service providers;
- Establish penalties and fines imposed on vertically integrated utilities for market abuses;

(3) Market Access and Consumer Protection
- Set a schedule for permitting direct access to retail customers by competitors;
- Begin utility-specific proceedings to determine price of service-tariffed service commitments for the generation services and PBR regulation for large investor-owned utilities;
- Establish appropriate standards of service by all retail service providers;
- Set a schedule of penalties and fines for all competitive service providers for consumer abuses;
- Establish appropriate standards of service quality (provided both consumers and competitors) by the distribution utility;
- Establish appropriate separation of generation service charges from other charges for an unbundled retail service;
- Establish appropriate information, reporting, and disclosure requirements for competitive retail service providers to ensure meaningful access to the market and informed decisions by consumers.

(4) Stranded Cost Issues
- Establish initial guidelines for estimating stranded costs including appropriate market price benchmarks for initial estimates of stranded costs;
- Utility-specific initial administrative determination of stranded cost magnitudes for purpose of establishing a transition charge;
- Utility-specific mitigation benchmarks;
- Transition period adjustment(s) of stranded costs and related charges (if applicable);
- Utility-specific final determinations of stranded cost magnitude for purposes of establishing stranded costs;

(5) Energy Efficiency/Renewables/Environmental Quality
- Establish statewide efficiency programs and related transition plans for individual utilities;
- Establish guidelines and restrictions on entities qualified to administer the systems benefits programs;
- Charter one or more efficiency utilities;
- Establish renewables and emissions portfolio definitions, requirements, and establish portfolio administrator;

(6) Implementation/Policy Review
- Establish benchmarks for policy performance;
- Establish reporting requirements of Discos, Retailcos and other market participants.

A. A Staged Transition to Competition

While we have separated these issues in different groupings, we recognize that many are related. Therefore, we have structured the transition process in a manner that will allow for flexible and balanced solutions for individual utilities. First, many aspects of this plan may require legislative authorization, which we will seek in the 1997 session of the General Assembly. For a second set of actions, the Board proposes development of educational initiatives and other activities (including billing redesign, continuing rate and rate design regulation, and energy efficiency programs) to advance existing statutory goals, and to encourage broader awareness and public participation during current and future stages of restructuring. We will rely on the Department of Public Service to assist the Board in establishing information and educational initiatives in the context of this investigation. As such we will rely on the Department to submit periodic information filings and report problems and progress. An initial informational filing should be provided on February 15, 1997. The third set of actions will be the creation and filing of initial utility-specific Utility Restructuring Plans that establish the details of (a) utility corporate restructuring proposals and competitive safeguards, (b) utility stranded costs, including mitigation proposals for stranded costs, (c) assurances of price stability over a transition period, (d) limited unbundling of rates presented on customer bills, and (e) a transition plan for existing and planned utility DSM program

activities. To the extent that utilities propose performance-based regulation, they should include the conditions of such regulation in their filings.

We also propose implementation proceedings to establish key elements and the necessary foundation for the Utility Restructuring Plans. At this point, we propose the filing of two Utility Restructuring Plans. The first plan (the "Phase I" plan) will outline the specific elements of each utility's proposal (*i.e.*, report how the utility plans to meet the requirements of this Order and legislative requirements). In these initial filings, utilities will be given an opportunity to raise potential problems and concerns with their proposal. The second Utility Restructuring Plan filing (the "Phase II" plan) will contain detailed proposals for rate elements and other detailed aspects of service over the transition period. Separate implementation proceedings would also focus on statewide efficiency programs, a renewables and emissions portfolio requirement, and obligations relevant to certification of retail service providers. Other future proceedings will deal with issues of stranded costs reconciliation and policy adjustments.

1. Legislative Authorization

Although the issue has not been litigated specifically, participants in the Roundtable and this Docket generally agreed that statutory changes would be necessary to fully open Vermont retail electric markets to direct competition.[174] Certain aspects of our proposals (*e.g.*, unbundled billing information, customer "right-to-know" standards, energy efficiency initiatives) can, and should, be implemented through rulemaking or other dockets pursuant to existing statutory authority. Many other aspects of the Board's proposal will require modification of existing statutes or new legislation.

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174. Vermont participants seem to agree that this situation contrasts with the law in New Hampshire, where the NH Public Utilities Commission ruled that no exclusive franchises exist as a matter of state law. A decade ago, this Board reached a similar conclusion with respect to in-state telephone toll competition, opening those markets to competition by Board Order. Docket 4946, Order of 2/21/86 at 26, n. 2.

In the present case, as stated earlier, we conclude that key policy issues regarding the basic structure of the electric industry in Vermont are properly made by the legislature. As with earlier complex matters within the utility arena, fact-finding, rate-making, case-by-case determinations, and other implementation issues should be left to the administration of the Board and Department, acting in public proceedings subject to legislative policy guidance.

2. Education and Public Awareness

The Board and participants in this investigation understand the importance of public and consumer involvement in the changes being proposed. Educated consumers are critical both from the standpoint of informing policy direction, and also in gaining consumer acceptance, understanding, and engagement so they can make informed choices in a restructured industry, and capture the savings that competition can provide.

Efforts to educate Vermont consumers and involve the public began two years ago with the establishment of the Competition Roundtable and Competition Workgroup. That process included roughly one hundred participants from a broad range of interests and perspectives on the industry. Many of the same participants are active in the current investigation. Every attempt has been made to provide the interested participants in this process an opportunity to make their views known. Over time, a broad base of divergent interests including legislators, regulators, advocates and consumers have developed a better understanding of this complex undertaking.[175]

For fundamental changes to occur throughout the electric industry, broad public understanding is required. Public awareness, education, and involvement of consumers will become more important as policies are adopted and implementation of those policies begins. A wide variety of media and a variety of forums should be used to provide a solid base of information to customers of all types.

At this stage, we conclude that public awareness can be further increased through public hearings, informational publications, and delivery of accurate information to the news media. In addition, utilities are encouraged to separate charges on their customer bills for power generation from other unbundled services at the earliest feasible date. We also encourage the Department to work with utilities to improve customer understanding and participation on these issues.[176] An public hearing on the Draft Report and Order was held on December 11, 1996, over the VIT network, providing an initial opportunity for public

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175. All positions presented during the technical phase of this investigation have been posted on the Public Service Board's "home page" on the internet. These filings and Board Orders in this investigation can be readily downloaded and accessed in Word Perfect Version 5.0. The Board's internet address is "http://www.state.vt.us/psb/".

176. We invite utilities to consider the value of including occasional informational notices on restructuring issues in a form approved by the Board or workshop participants in customers' bills.

comment and participation. We hope to participate in, and will support, additional public hearing and informational sessions as te legislative process unfolds.

3. Initial Utility Restructuring Plans

Utilities will be asked to submit their initial Utility Restructuring Plans to this Board by June 30, 1997. At this time, our plan calls for the establishment of initial structural changes (*i.e.*, functional separation or operational unbundling) to three of Vermont's largest investor-owned utilities. All utilities will also be asked to identify the initial elements of non-structural mechanisms for appropriate accounting practices and codes of operation and conduct. These filings will also establish utility plans for providing limited unbundled service rates as described in Sections IV and V. We propose that the initial Utility Restructuring Plans ("Phase I" plans) be followed by a second plan ("Phase II") that includes the actual detailed rate elements, specific service quality standards, and specific productivity adjustments (if PBR is involved) and other details necessary for implementation. The June 30, 1997 filings need to include, at a minimum, the broad elements of each Utility's Restructuring Plans such as strategies for meeting the CSO obligations, intentions for pursuing PBR, and potential rate design considerations in establishing the CTC. We request, however, that the Phase I plans include a detailed proposal for separating (unbundling) potential competitive services, such as generation service, from the ongoing regulated monopoly services.

For investor-owned utilities, the Utility Restructuring Plans may include a proposal for performance-based regulation during the transition. Essential elements of a PBR scheme are discussed below. Whether in concert with a PBR proposal, or separately, utilities will be asked to file proposals for establishing stable prices over traditional tariffed services over the five-year transition period. As noted in Section IV, this service offering will be referred to as the "Continuing Service Offer" of the established electric utility. Municipal and cooperative utilities are also encouraged to include a proposal for assuring stable rates or capped prices over the period of this plan. Other elements of Utility Restructuring Plans are listed in Appendix F.

As described in Section VI, the Board's Plan calls for the establishment of initial restructuring proceedings to deal with issues of stranded costs. An initial implementation proceeding will also be necessary to establish standards for Utility Restructuring Plans.

4. Promoting Performance-Based Regulation

We conclude that regulation of traditional service may best be accomplished through alternatives to traditional cost-of-service regulation. Alternative forms of regulation (also known as "incentive regulation," "performance-based regulation" or "PBR") can be useful in

encouraging efficiency and innovation by regulated monopoly companies in the future (primarily the distribution services). While we will not at this time require PBR regulation for electric utilities, investor-owned utilities will be encouraged to file PBR proposals in their Utility Restructuring Plans. Alternative regulation can be used to provide assurances of stable prices during a transition period while encouraging utilities to mitigate their costs. The essential elements of a performance-based regulation Plan can be modeled on those used in telecommunications, but should include (1) a baseline for prices, (2) performance or productivity adjustments including adjustments of mitigation of stranded costs, (3) service quality standards, and (4) penalties for poor performance and incentives to encourage efficient performance and successful mitigation of above-market power costs.

As discussed in Sections IV and VI, PBR provides an important mechanism related to the ultimate recovery of stranded costs and may provide additional opportunity for stranded cost recovery and assuring stable prices for traditional utility services. We encourage proposals that (1) provide stable price assurances over a transition period for traditional utility services (2) establish a separate charge for stranded costs, (3) may allow for appropriate adjustments to stranded cost recovery to reflect mitigation, and (4) ideally establishes a cap on the stranded cost surcharge over the recovery period.

B. Restructuring Implementation Proceedings

As noted throughout this Report, in order to implement multiple interrelated parts, we will need to conduct one or more implementation proceedings to address the following matters: (1) establish and fund statewide energy efficiency programs and appropriate administrative mechanisms; (2) establish an appropriate renewables portfolio standard and program administrator; (3) establish appropriate certification requirements for retail service providers and relevant consumer protections; (4) establish appropriate policy benchmarks, information requirements and filings; and (5) establish mechanisms for determining the value of stranded costs in a final reconciliation proceeding. A timeline for these implementation proceedings is presented in Appendix F and shows how these processes could be performed to coincide with the timeframe for retail choice presented in this Plan.

C. Policy Review, Evaluation, and Adjustment

One of the benchmark principles established early in this process is the need to understand the implications of industry restructuring on consumers and the public at large. We must maintain the flexibility to make modifications and improvements even when we believe those consequences have been clearly identified.

The changes contemplated for this industry are substantial, including many that are outside of Vermont's control. Fundamental changes in policy at the state, regional, and national level will need ongoing consideration. Even where challenges are anticipated, adjustment and correction will be needed to reflect the variable nature of the changing demands on existing and future institutions. We expect, for example, that consumer education and advocacy will be in greater demand during the early stages of transition. We believe that the process should provide objective measurements of change.

An evaluation process will be designed and implemented to monitor change and identify problem areas as restructuring moves forward. Information and reporting requirements will be developed to report on changes in this industry. We encourage the Department to work with utilities and other stakeholders to identify: (1) key policy concerns that require monitoring and supervision; (2) information needed to properly monitor the environment; (3) reporting institutions that may be most efficiently relied upon to provide the necessary information; and (4) a process for identifying problem areas and proposing adjustments to policies or programs to address the concerns.

XIV. ORDER

IT IS HEREBY ORDERED, ADJUDGED, AND DECREED by the Public Service Board of the State of Vermont, pursuant to 30 V.S.A. §§ 2, 203, 209, 218, and in consideration of the participants filings in this Docket, that:

1. The Department of Public Service shall file its plans for public education and consumer awareness to assist the Board with the next phase of this investigation. This plan shall be filed on February 15, 1997. This plan will be treated as an informational filing; however, we request that the Department work with utilities in the development and implementation of these activities. The Department's plan should be complete with specific objectives, timelines and budgets.

2. All regulated Vermont electric utilities shall file detailed estimates of potential stranded generation assets and market price forecasts as described in Section VI of this Report by February 15, 1997.

3. All regulated Vermont electric utilities shall file plans that identify opportunities for the mitigation of potential stranded costs, including potential asset appreciation opportunities as described in Section VI of this Report by March 15, 1997.

4. We will open a proceeding into potential stranded costs and mitigation opportunities within thirty days of the above filings.

5. The Department of Public Service shall file, by March 30, 1997, its proposal for establishing competitive safeguards against vertical market power abuses. We will open an investigation into this proposal within 30 days of that filing.

6. Vermont's electric utilities shall file detailed Utility Restructuring Plans and general standards for restructuring, including codes of conduct, as described in Sections V, XIII, and Appendix F of this report by June 30, 1997. Also on June 30, 1997, VELCO and the Department of Public Service shall file proposals to modify the ownership or governance of VELCO (if applicable), to identify codes of conduct, and to define other protections necessary to address any residual competitive concerns not addressed through appropriate regional entities or transmission tariffs.

7. We will open a proceeding into Utility Restructuring Plans and general standards within thirty days of the filings.

8. The Department of Public Service shall file a plan for acquiring energy efficiency resources during the transition period. That plan should identify current and potential statewide programs, as described in Section IX of this report. The Department shall also include in its plan an estimate of the magnitude of cost-effective energy efficiency resources

available over a range of avoided costs estimates using Vermont's societal test as a screen. The Department shall file its plan by March 31, 1997.

9. We will open a proceeding to review the Department's transition plan within thirty days of its filing. We will also open a proceeding to determine the best mechanism for ensuring the delivery of cost-effective energy efficiency programs, with the initial focus on our "efficiency utility" proposal as described in Section IX, above. All regulated Vermont electric utilities will be parties to both investigations. Other interested individuals or groups are invited to file intervention petitions pursuant to Board Rule 2.209.

10. All participants in this Docket shall have an opportunity to file detailed proposals on the structure of a Vermont renewables portfolio requirement as described in Section X of this Report on or before August 15, 1997. All participants in this Docket shall have an opportunity to file detailed proposals on the structure of a Vermont emissions portfolio requirement as described in Section XI of this Report on or before August 15, 1997.

11. We will open a proceeding to review the filings on a renewables portfolio requirement within thirty days of the filing deadline.

12. All participants are invited to identify the scope of issues and make procedural proposals for the specific Utility Restructuring Proceedings coincident with the initial filings in those restructuring proceedings specified above. In particular, the Board requests comments on the scope, nature, sequencing of issues, timeline, the relationship to other restructuring proceedings, and the potential implications for the cut-over date. The Board intends to establish a scope and schedule early in each Utility Restructuring Proceeding defined above. These scope and schedule proposals shall be made as filings in this investigation or until a separate contested case proceeding has been established. The scope, timeline, and sequencing of issues in each Restructuring Proceeding will be revised as necessary to ensure an efficient review and proper sequencing of restructuring issues.

DATED at Montpelier, Vermont, this 31st day of December, 1996.

s/Richard H. Cowart)
)
) PUBLIC SERVICE
)
s/Suzanne D. Rude) BOARD
)
) OF VERMONT
s/David C. Coen)

OFFICE OF THE CLERK

FILED: DECEMBER 31, 1996

ATTEST: s/Susan M. Hudson
Clerk of the Board

NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board of any technical errors, in order that any necessary corrections may be made.

APPENDICES

Appendix A: Glossary

Aggregator: An entity that combines customers into a purchasing group. The vertically integrated investor-owned utility, municipal utilities, and rural electric cooperatives perform this function in today's power market. Other entities such as buyer cooperatives or brokers could perform this function in a restructured power market. Any entity properly certified to act on behalf of retail customers in procuring the generation portion of electric service.

Basic Service Offer ("BSO"): Service offered to customers by the distribution company but provided by a retail service provider through contract. May be priced either to float with the spot market or fixed on a longer-term basis. For purposes of disconnection policy, the basic service offer is a distribution service.

Bilateral Contract: A direct contract between a power producer and a user or broker.

Bottleneck Facility: A point on the system, such as a transmission line, through which all electricity must pass to get to its intended buyers.

Broker: A retail agent who buys and sells power. The agent may also aggregate customers and arrange for transmission and other ancillary services as needed.

Competition Transition Charge ("CTC"): A non-bypassable charge used to fund stranded cost recovery and stranded benefit programs.

Continuing Service Offer ("CSO"): On-going stable price offers of traditional utility service over a restructuring transition period.

Contract Path: A direct physical transmission tie between two interconnected entities. When utility systems interchange power, the transfer is presumed to take place across a "contract path." In actuality, power flows do not necessarily follow the contract path, but move in accordance with network flow conditions.

Corporate Unbundling: Full divestiture of generation, transmission, and distribution resources. See also "Unbundling."

Customer Choice: Allowing all customers to purchase the generation portion of their electric service from competitive entities, including generation service companies ("Gencos") or retail service companies ("Retailcos"). See also "Direct Access."

Demand-Side Management ("DSM"): The planning, implementation, and evaluation of utility-sponsored programs to influence the amount or timing of customers' energy use. See also "Energy Efficiency."

Direct Access: The ability of a retail customer to purchase generation services directly from the providers (the wholesale market) rather than through a local distribution utility. It is also referred to as "retail wheeling." See also "Customer Choice" and "Wheeling."

Distributed Generation: A distribution system characterized by the siting of small, discrete generation facilities at strategic points for the purpose of meeting local (substation level) peak loads and displacing or deferring the need to build additional local distribution facilities.

Distribution: The delivery of electricity to ultimate retail customers (homes, businesses, etc.).

Disco: In a restructured industry, the franchised electric utility, regulated by the Vermont Public Service Board, that constructs and maintains the distribution system connecting the transmission grid to the ultimate customer.

Divestiture: The separation of specified company functions from others by selling (spinning-off) or in some other way changing the ownership of the assets related to that function. In the electric industry, it is most commonly associated with the spinning-off of generation assets so that they are no longer owned by the same shareholders who own the transmission and distribution assets. See also "Unbundling."

Economic Efficiency: Improvements in the production and consumption of goods and services resulting in increases in the overall value of resources used to deliver those goods and services.

Energy Efficiency: Improvements in energy-consuming processes such that less energy is required to perform a particular function. Energy efficiency is distinguished from DSM in that the latter pertains to utility-sponsored and financed programs, while the former does not imply a particular method of delivery or funding.

Federal Energy Regulatory Commission ("FERC"): FERC regulates the price, terms and conditions of power sold in interstate commerce and regulates the price, terms and conditions of all transmission services. FERC is the federal counterpart to state utility regulatory commissions.

Functional Unbundling: See "Unbundling."

Functional Separation: Operational Unbundling. See "Unbundling."

Generation Company ("Genco"): A company that owns or has entitlements to electric generation and sells it at wholesale and, possibly, at retail. Typically, Gencos will not face traditional cost or price regulation in a restructured utility industry.

Grid: A system of interconnected power lines and generators that is managed so that the generators are dispatched as needed to meet the requirements of the customers connected to the grid at various points.

Hedging Contracts: Contracts which establish prices and quantities of electricity to be delivered at a specified future time.

Investor-Owned Utility ("IOU"): A company, owned by stockholders for profit, that provides utility services. The term differentiates such utilities from non-profit municipal and cooperative utilities.

Independent System Operator ("ISO"): A neutral operator responsible for maintaining instantaneous balance of the grid system. The ISO performs its functions by controlling the dispatch of flexible plants to ensure that loads match resources available to the system. Under some restructuring proposals, the ISO would have expanded responsibilities for transmission planning, open access tariffs, and taking appropriate actions to curb market power abuses.

Market Power: The control by a dominant firm or firms over a market and associated prices, along either vertical or horizontal dimensions. Horizontal market power pertains to the ability to force the market prices above competitive levels. Vertical market power refers to the ability of a firm to use its control of bottleneck resources to unfairly advantage its activities in competitive markets.

Munico: A retail service provider owned by one or more municipal electric utilities. Municos can also be Retailcos or Gencos.

Municipal Utility: A provider of utility services owned and operated by a municipal government.

Natural Monopoly: An industry or activity in which one firm can produce that level of output sufficient to meet the entire demand for the product at a lower total cost than can any combination of multiple firms. Natural monopolies occur in industries that exhibit decreasing average long-run costs as output increases (economies of scale).

Obligation to Serve: The requirement of a utility to provide electric service to any customer who seeks that service, and is willing to pay the rates set for that service.

Open Access: A requirement that facilities of wire service providers must be available for use by any existing electric utility or non-utility generator and any other entity. Under EPACT, it refers to open access to transmission facilities.

Operational Unbundling: See "Unbundling."

Peak Load or Peak Demand: The electric load that corresponds to a maximum level of demand in a specified time period.

Performance-Based Regulation ("PBR"): A rate-setting mechanism which attempts to link rewards (generally profits) to desired results or targets. PBR sets rates, or components of rates, for a period of time based on external indices rather than directly on a utility's cost-of-service. PBR is intended to provide better incentives to operate efficiently than might traditional cost-of-service regulation.

Power Pool: An entity established to coordinate short-term operations to maintain system stability and achieve least-cost dispatch. The dispatch provides back-up supplies, short-term excess sales, reactive power support, and spinning reserves. The regional power pool in New England is NEPOOL.

Provider of Last Resort: A legal obligation (traditionally borne by utilities) to provide service to a customer in absence (for whatever reason) of alternative competitive providers. Under the Board's restructuring proposal, the distribution utility would be responsible for securing such service, by bidding out the obligation to a retail service company (or companies).

Reliability: Electric system reliability has two components: adequacy and security. Adequacy is the ability of the electric system to supply the aggregate electrical demand and energy requirements of the customers at all times, taking into account scheduled and unscheduled outages of system facilities. Security is the ability of the electric system to withstand sudden disturbances such as electric short circuits or unanticipated loss of system facilities.

Renewable Resources: Resources that are naturally replenishable, but flow-limited. Renewable energy resources generally include biomass, hydraulic (hydro), geothermal, solar, and wind. Also included may be a variety of emerging technologies.

Research and Development: Research is the discovery of new knowledge. Development is the application of new knowledge to create new services or products.

Restructuring: The reconfiguration of the vertically-integrated electric utility in order to capture the benefits of competitive provision of goods and services where appropriate.

Retail Service Company ("Retailco"): A company (or affiliate of existing company) that sells energy services to retail customers. A Retailco can be a Genco, a broker, or a retail aggregator.

Retail Wheeling: See "Direct Access."

Regional Transmission Group ("RTG"): A voluntary organization of transmission owners, users, and other entities interested in coordinating transmission planning, expansion, operation, and use on a regional and inter-regional basis. Such groups are subject to FERC jurisdiction.

Special Contracts: A contract that provides a utility service under prices, terms, and conditions other than those set out in the utility's applicable tariffs.

Stranded Benefits: Public interest programs and goals which could be compromised or abandoned under a restructured electric industry. Potentially stranded benefits include: environmental protection, renewables, fuel diversity, energy efficiency, and low-income ratepayer assistance, among others.

Stranded Costs: Generation-related, historic costs of an electric utility that may become unrecoverable in an open market for electricity. (Note that this definition does *not* imply that all such costs should be recoverable during a transition to competition.)

State Implementation Plans ("SIPs"): Required of states that are not in attainment of Clear Air Act standards for certain categories of pollutants. SIPs are required of states in order to meet those standards.

Sunk Costs: A cost that either has already been incurred or is an unavoidable future cost (*e.g.*, nuclear decommissioning costs) resulting from past decisions.

Tariff: A document, approved by the responsible regulatory agency, listing the terms and conditions of service, including a schedule of prices, under which utility services will be provided.

Transmission Company ("Transco"): A regulated entity that owns, and may construct and maintain, wires used to transmit wholesale power. It is regulated to provide non-discriminatory connections, comparable service, and appropriate cost recovery.

Unbundling: The disaggregation of electric utility services into separate components. "Corporate unbundling" refers to the complete divestiture of generation assets from transmission and distribution assets. "Operational unbundling" (or "functional separation") refers to the separation of the corporation into distinct wholly-owned subsidiaries or operating units. "Functional unbundling" refers to the disaggregation of formerly bundled services into individual services or service elements.

Universal Service: Electric service sufficient for basic needs (an evolving bundle of basic services) available to all members of the population regardless of income.

Utility: A regulated entity that provides goods and services deemed to be essential to the public and that also exhibits the characteristics of a natural monopoly.

Vertical Integration: An arrangement whereby a single firm owns all the aspects of producing, selling, and delivering a product or service.

Wheeling: The transmission of electricity by an entity that does not own or directly use the power it is transmitting. "Wholesale wheeling" describes bulk transactions among utilities (or marketers), and retail wheeling refers to the transport of power and energy directly from producers to retail (ultimate) customers.

Wires Charge: A charge, associated with the use of transmission or distribution wires, levied on power suppliers or their customers.

Appendix B: Abbreviations and Acronyms

AIV: Associated Industries of Vermont.
ACE: Account Correcting for Efficiency. Adjustment to recapture revenues lost to utilities from the implementation of DSM programs.
BED: City of Burlington Electric Department
BSO: Basic Service Offer.
CAA: Clear Air Act.
CVPS: Central Vermont Public Service Corporation.
CEQ: Council on Environmental Quality.
CPG: Certificate of Public Good. Certification required of the regulated utility companies that provide service in Vermont.
CP&LI: Consumer Protection and Low-Income.
CP&LIS: Consumer Protection and Low-Income Subcommittee of the Negotiating Group.
CRT: Capacity Reservation Tariff.
CSO: Continuing Service Offer.
CTC: Competition Transition Charge.
CVPS: Central Vermont Public Service Corporation.
Disco: Distribution Utility Company.
DOE: Department of Energy.
DPS: Vermont Department of Public Service.
DSM: Demand-Side Management.
EIS: Environmental Impact Statement. An EIS was prepared by FERC to accompany FERC's Open Access NOPR, which subsequently became FERC Rule 888.
EPA: Environmental Protection Agency.
EPS: Emissions Portfolio Standard.
EPACT: Energy Policy Act of 1992. EPACT creates a new class of power generators, exempt wholesale generators (EWGs), that are exempt from the provisions of the Public Utility Holding Company Act of 1935 and grants authority to FERC to order and condition access by eligible parties to the interconnected transmission grid.
EPRI: Electric Policy Research Institute.
FERC: Federal Energy Regulatory Commission.
Genco: An electric generation company.
GMP: Green Mountain Power Corporation.
HHI: Hirshman-Herfindahl Index. A measure of horizontal market power.
IOU: Investor-Owned Utility.
IRP: Integrated Resource Planning.
IPPs: Independent Power Producers.
ISO: Independent System Operator.
LIHEAP: Low-Income Home Energy Assistance Program.
NARUC: National Association of Regulatory Utility Commissioners. An advisory council composed of governmental agencies of the fifty States, the District of Columbia, Puerto Rico and the Virgin Islands engaged in the regulation of utilities and carriers.
NCSL: The National Conference of State Legislators. A national advisory council which provides services to state legislatures "by bringing together information from all states to forge workable answers to complex policy questions."
NEPOOL: New England Power Pool.
NERC: North American Electric Reliability Council. Together with the Northeast Power Coordinating Council ("NPCC"), provide the voluntary hierarch of standards used in the region by NEPOOL to ensure transmission system reliability.
NOPR: Notice of Proposed Rulemaking.
NPCC: Northeast Power Coordinating Council. See NERC.
NSPS: New Source Performance Standards.
NUG: Non-Utility Generator.
NYPA: New York Power Authority.
OTAG: Ozone Transport Assessment Group.
OTR: Ozone Transport Region.
PBR: Performance-Based Regulation.
Poolco: A power pool in a restructured industry.
PSB: Vermont Public Service Board.
PURPA: Public Utility Regulatory Policy Act.
Retailco: A retail electric company.
RPS: Renewables Portfolio Standard.
RTG: Regional Transmission Group.
SBC: System Benefits Charge.

SIP: State Implementation Plans.
T&D: Transmission and Distribution.
Transco: A transmission company.
VNRC: Vermont Natural Resource Council.
WEC: Washington Electric Cooperative, Inc.
VEC: Vermont Electric Cooperative, Inc.
VECC: Vermont Electric Consumers Coalition.
VELCO: Vermont Electric Power Company, Inc. Vermont's transmission utility or Transco, owned by Vermont's electric utilities.
VPPSA: The Vermont Public Power Supply Authority, a joint action agency empowered by an act of the Legislature in 1979 and owned by the municipal utilities in Vermont.

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Appendix E: Vermont Principles on Electric Industry Restructuring

VERMONT PRINCIPLES ON ELECTRIC INDUSTRY RESTRUCTURING

The Workgroup has agreed on two overarching principles that should guide any development of a restructured electric industry in Vermont and the region. They are **efficiency** and **fairness**. A restructured industry should provide opportunities to capture improved efficiencies in the production, delivery, and use of electricity, and seek to maximize customer value at the least cost to society.[1] In addition, the system should treat all producers and consumers equitably, according to the costs they impose and benefits they derive, both during and after the transition to a restructured industry. Realizing such efficiency gains should improve the well being of society and promote the economic vitality of Vermont.

These fundamental principles can be broken down into a set of fourteen more precisely defined principles.[b] A policy of increased competition in the electric utility industry may be desirable to the extent that such a policy can be defined and implemented in a manner that preserves and promotes the following interdependent principles.[c]

1. High-quality, reliable electric service must be maintained. We must maintain a level of system integrity sufficient to accommodate a full range of customer reliability and power quality choices.

2. Public health and safety must be assured.

3. Efficiencies in the production, delivery and use of electric services must continue to be increased where possible.

4. Nondiscriminatory open access to the electric system for wholesale transactions must be promoted.[d] Comparability must be assured for generators competing with affiliate interests of bottleneck service providers (*i.e.*, transmission and distribution services).

5. Retail customer choice can provide benefits beyond those provided by a competitive wholesale market. Customer value may be increased through the expansion of choice among providers and types of service.[e] Therefore, methods of restructuring to be explored must include, but not limited to, retail choice.

6. Environmental protection is a priority; any restructured industry system must ensure a high level of environmental quality and reduced environmental cost.[f]

   Vermont plans for restructuring must include precise and realistic mechanisms to secure attainment of this principle.

7. A restructured industry must preserve key public benefits of the current system, including cost-effective end-use efficiency, research and development, and the development, commercialization and use of renewable resources.

   Vermont plans for restructuring must include precise and realistic mechanisms to secure attainment of this principle.

8. Existing commitments of utilities arising from past decisions made pursuant to historic regulatory and legal principles must be honored. Utilities are entitled to recover legitimate, verifiable, and otherwise recoverable and prudently incurred costs pursuant to those principles. Utilities have an obligation to take all reasonable measures to mitigate the costs of their existing commitments.

   Vermont plans for restructuring must include precise and realistic mechanisms to secure attainment of this principle.

9. Electric service is a basic necessity. Any restructuring of the electric utility industry must address the needs of consumers in general and in particular low-income consumers. Reform proposals must specifically empower all consumers with the necessary resources to assume responsibility and accountability for their electrical services.

   Vermont plans for restructuring must include precise and realistic mechanisms to secure attainment of this principle.

10. The benefits of restructuring must extend equitably to all classes of consumers.[g] The benefits of restructuring must not be achieved through shifting of costs among customer classes.

11. There must be a clear system of public accountability and public participation in any restructured system. The implications of a new utility structure must be thoroughly understood before being implemented.

12. Vermont's policy must enhance the ongoing competitiveness of its businesses and economy.

13. Universal access to safe, efficient and reliable electric distribution service must be assured in a restructured industry. Electric distribution service must be available to all customers. Restructuring of any other aspect of the electric industry must not harm or reduce customer access, customer service or customer protections in regard to electric distribution service.

    Universal access to reliable, reasonably priced electric service must be assured in a restructured industry. Electric service must be available to all consumers, and no consumer should be denied continuing or new service because they are deemed to be undesirable in a competitive environment. Achieving this end may require designation of a provider of last resort (which may be the local distribution company or some other entity), or it may be achieved through requirements placed on some or all retail electric service providers.

14. Restructuring must maintain and improve upon customer service safeguards and protections, including line extensions, service connections, deposits, bill payment options, budget billing, disconnection notices and limitations, reconnection, metering, due process and appeal, and liability. Additional customer service requirements and customer protections may need to be developed in response to restructuring.

Endnotes

1. By the phrase "maximized customer value at the least cost to society" we mean to include both customer value and costs that would result from efficient markets and those other costs that are external to market transactions.

b. Each statement of a principle is intended to apply both the transition and the ultimate outcome.

c. These principles represent provisional compromises and are agreed to on the condition that agreement is also reached on the specifics of implementation.

d. This includes both transmission and ancillary services. (Note: Wholesale access may include access for wholesale transmission services to physical facilities typically referred to as distribution plant.)

e. Customers must be held accountable for their choices made in open market. Such accountability must extend to risks that exist in normal functioning markets (*e.g.*, loss of service resulting from business failure of a chosen service provider). Nevertheless, the legal obligations and associated responsibilities of ongoing entities to meet commitments established under contract will provide certain protections.

f. The word "system" is not intended to reflect the physical electric industry; it should be interpreted to reflect the system more broadly.

g. Equity, here, is also intended reflect a temporal component. The benefits of restructuring must extend to all customer classes contemporaneously.

Appendix F: Timeline For Further Actions

Appendix G: Summary of Legislative Proposal

The Board will propose legislation with the following principal elements:

1. Establishing Basic Principles: The bill will recognize that the fourteen principles established by the Vermont Competition Roundtable, and adopted by the Board, provide useful guidance for achieving a fair and efficient transition to an electric industry that enables customers to choose their electricity providers. Those Vermont Principles will guide both the legislation and the Board's implementation of legislative policy.

2. Removing the Statutory Bar to Customer Choice: The bill will remove the existing statutory limits on electricity customers' purchase of energy services from electricity providers other than their local franchised utilities. All Vermont customers will be given this opportunity; separate amendments are required for investor-owned, municipal, and cooperative utilities.

1. Protecting Service Quality: The bill directs the Board to ensure that universal access to safe, efficient and reliable electric service is preserved both during and after the transition to competition.

2. Setting Responsibilities and Roles for Different Utility Providers: The bill will authorize the creation, certification, and supervision of various types of electric companies, with new roles and responsibilities:

    a. Existing, integrated utilities will be required to functionally separate to ensure against anti-competitive activities. Municipal and cooperative utilities will be authorized to serve customers outside of their existing service territories, will not be required to functionally separate, but will be required to adopt appropriate safeguards.
    b. Distribution companies will remain regulated, franchised utilities.
    c. Retail electricity companies will be subject to certification and supervision by the Department of Public Service and Public Service Board. They will be allowed to provide retail electric services throughout the state.

3. Promoting the Customer's Right to Know: The bill will require the Board to adopt rules requiring power suppliers to inform retail customers about their power supply options: this information will include the price terms, generation types, and environmental characteristics of each power supply offer.

4. Providing Energy Assistance for Low-Income Households: The bill will authorize energy utilities to offer energy assurance programs for low-income households. It also creates a broad-based home energy assistance program for low-income consumers funded by a small (1/4%), broad-based, fuels gross receipts tax.

5. Recovering Utilities' Stranded Costs: The bill will authorize the Board to set nondiscriminatory, non-bypassable wires charges on retail electric consumption so that Vermont's existing integrated utilities may recover their prudent, legitimate, and otherwise recoverable embedded costs, provided that the utility has appropriately mitigated them.

6. Promoting Energy Efficiency, Environmental Protection and Renewable Resources: The bill will direct the Board to promote energy efficiency, environmental quality and

renewable energy production, and will authorize the use of four new mechanisms to accomplish these goals:

a. Application of a renewables portfolio standard to all retail electrical service.
b. Application of an emissions portfolio standard to all retail electrical service.
c. Establishment of a small wires charge for the development and commercialization of renewable resources collected from all retail consumption of electrical service.
d. Establishment of a wires charge for energy efficiency services, delivered through one or more certificated statewide efficiency utilities, collected from all retail consumption of electrical service.

7. Authorizing Incentive Regulation: The bill will authorize the use of incentive and performance-based regulation for those electric companies subject to price regulation.